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ORIGINAL ARTICLES

EDUCATION OF THE INSANE.*

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This Conference annually discusses and suggests solutions for various problems. I believe the most important problem before the Conference at this meeting, is the solution of the "how" of reducing the number of commitments to our insane hospitals, of increasing the number of discharges therefrom, and at the same time making those in the hospitals producers of wealth, as well as consumers, to the end that they may approximate self-support. The proportion of the population that is going insane is yearly increasing. Every insane hospital in the State is crowded far beyond its capacity, and the time is here when more hospitals are needed, and they must soon be built if the present rate of increase continues; and there is certainly no evidence of abatement. There is not a county in the State that is not bearing a heavy burden because of the number of insane who are being supported at public expense. Our insane population numbers about 6,000. It costs approximately $200 per capita to care for them. We are therefore spending annually in the care of our insane approximately $1,200,000. In addition to this expense for maintenance, there is a considerable sum necessary for new buildings and repairs on old ones. Estimating the average earning capacity of these patients, if well, at $500 per annum, there is an additional loss to the State of over $3,000,000. This cost in money does not in any wise include the cost in sorrow which these patients and their friends must suffer. There is no way of estimating this cost in dollars because money cannot pay it. I do not believe we can overestimate the importance of the

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subject. If there be a solution for these problems which will better conditions I am sure we are justified in giving this solution our very best efforts. After a careful study of conditions and remedies I am convinced that there is a remedy, and this remedy is in education. This education I believe to be of two kinds. First the public should be educated on the nature and causes of insanity and how it may be prevented. The education of this same public on the nature and causes of tuberculosis and how to prevent it has resulted in much good, and I predict will very soon result, even now is resulting, in a decrease of the disease.

My study of insanity has convinced me that over 50 per cent. of it is preventable. Insanity is not a disease. For the sake of convenience we speak of it as being a mental disease. As the mind has no physical existence it cannot be subject to disease. Correctly speaking, insanity is a condition in which there is a loss or perversion of one or more of certain so-called mental faculties. This condition is the result of the loss or perversion of function of certain physical structures of the body. That structure which is always disturbed in function is the brain, although the disease may be in some other organ or tissue. The mental faculties which are most frequently lost or perverted in the insane patient are those of, perception, attention, memory, ideation, emotions and sentiments, the will, and consciousness. While there is occasionally a complete loss of one or more of these, there is always perversion of one or more to a varying degree. The perversions of the faculty of perception are manifested by symptoms which we call illusions and hallucinations. For the mind properly to perceive, there must be normal function of the organs of sight, hearing, taste, smell, touch, pain, temperature and muscle sense, the nerves connecting them with the brain and the sensory centers in the brain, the association brain centers where the percepts are synthetized into concepts and the association tracts which connect the sensory centers or areas with the association areas. Any disturbance of function of any of the brain areas mentioned or of the connecting tracts, may result in the manifestation of illusions or hallucinations, or both. An illusion is a term applied to an inaccurate perception. The most common illusions are of sight and hearing. The insane person who has illusions sees objects and hears sounds which he interprets as being other than what they are. The person with hallucinations projects out of consciousness objects and sounds and various other perceptions which have no existence objectively. In other words he is the victim of various imaginary sensory impressions.

One of the most important faculties of the mind in intellectual development is, attention. This is always perverted in insanity, varying from slight perversion to complete loss. This perversion is manifested by the inability of the patient to exercise a selective power upon the myriads of impressions that invade consciousness, and inability to concentrate the mind upon any subject for a given time. In some forms of insanity there are morbid states of hyperattention. The patient has one fixed idea which cannot be crowded out by any other.

The perversion of memory in the insane is frequently very marked. In a few forms of insanity it may be greatly exalted, but it is usually depressed, and varies from slight depression to complete loss. The retentive power of the insane is lessened because few of the events that happen in their daily lives cause strong mental vibrations.

The most common symptom of insanity is a form of perversion of ideation which we term, delusions. Delusions are of the nature of false judgments of self and external objects. The insane person may have delusions concerning his own personality, such as thinking himself some one else. He may have delusions of property, thinking himself rich when poor, or poor when rich. He may have delusions of character thinking himself evil when good, or good when evil. He may have delusions of health, thinking himself sick when well, or well when sick. Delusions of persecution and suspicion are not normal. These delusions frequently incite the patient to do murder. Delusions are usually of an exalted or depressed type, depending upon the character of the insanity, and the same patient may manifest both kinds at different times.

The emotions and sentiments of the insane are subject to a wide range of variation in their perversions. Many are oppressed by morbid fears. Some seem to have lost all power of being affected in an emotional way, others have such an unstable condition of the emotions that they vary from laughter to tears, praying to cursing, high good humor to extreme anger, in the twinkling of an eye for the most trivial of causes. The insane are persons of extreme moods and their emotional effects are out of all proportion to the causes operating. The sentiments of love and hate are quite frequently perverted. The insane love to-day where they hate to-morrow.

The perversion of the will in the insane is of a varying degree. In some there is very little perversion but in others it may be of such an extreme degree, that a will-less condition exists. The decreased will power is responsible for many of the crimes committed by the insane and for the uncertain and variable character so frequently manifested.

The perversion of consciousness manifested by the insane varies from very slight disturbances to complete loss, in certain stuperous states.

You will readily observe from the above discussion that insanity is a condition of varying degrees, and varies from a very slight departure from the normal to perversion of extreme degree.

In order that the public may assist in combating the increase of insanity they must be made acquainted with its causes. The cause of first importance in the production of insanity is an inherited or acquired predisposition, through bad ancestry or disease and excesses. It is estimated that out of every one hundred persons there is one who has an unstable nervous system and is predisposed to insanity. Estimating the population of our State at three and one-half millions, there are at least thirty-five thousand people in the State who are so predisposed. Nervous instability and predisposition to insanity are usually congenital, and are

manifested by certain anatomical, physiological and psychic anomalies or defects, some of which are easy of detection while others are more obscure. These anomilies of development are called stigmata of degeneration. The anatomical anomilies are of the nature of malformations and the most common are anomilies or malformations of the cranium, asymmetry of the face, deformities of the palate, teeth, tongue, lips, nose, eyes and ears, and anomilies of the body in general and the skin. The physiological stigmata are represented by anomilies of motor function, sensory function, speech, genito-urinary function, instinct or appetite; such as an uncontrollable appetite for food, liquor and drugs, diminished resistance against external influences and disease, and retardation of puberty.

The psychic anomalies are idiocy, imbecility, feeble-mindedness, night terrors, precocity, one-sided talents; disequilibration, eccentricity and moral delinquency.

Children showing any of the above mentioned anomalies are more predisposed to insanity than those who do not show anomalies. I believe there should be State wide inspection of school children; municipal for towns and cities and county for country schools, to the end that these children may be searched out, a record kept of their defects, and their teachers and parents apprised of the same so that they may be more carefully safeguarded by teachers and parents.

Predisposition alone will not cause insanity. There must be one or more exciting causes working in conjunction with the predisposition. One very common exciting cause is our unwise system of education. No provision is made in the curriculum of the average school for the child with the unstable nervous system. The course of study is so heavy that it taxes the strength of the child with strong and stable nerves to carry it. The rest of the children are expected to keep the pace set by the strongest and are urged by foolish teachers and more foolish parents to greater efforts until frequently they are educated into a hopeless condition of insanity.

Unstable children should enter school late, be given short hours of study with much outdoor exercise, permitted to acquire their education slowly, not given too much education, and advised to follow a vocation which requires more physical than mental labor.

A tendency to excesses is an evidence of an unstable nervous system, and excesses of all sorts act as exciting causes of insanity. The excessive use of tobacco frequently causes insanity; especially is this true of cigarette smoking in the young, or of the use of tobacco in any form in excessive quantities by the young. Alcoholic excesses act as exciting causes of insanity in about twenty-five per cent. of all cases. Stress and strain, trouble and worry, are other exciting causes responsible for much insanity. The monotony of life with an absence of mental diversion is responsible for much of the insanity among the wives of farmers. Those with an unstable nervous system require more sleep than other persons

as it takes them longer to recover from the effects of fatigue. An insufficient amount of sleep is the cause of a considerable amount of insanity.

Over-drafts upon the nervous system of young or old must in the end be paid by nervous bankruptcy.

Improper preparation and an improper quantity and quality of food also cause insanity quite frequently.

Preventable diseases such as syphilis act as exciting causes of not an inconsiderable amount of insanity. Likewise excessive labor and exposure, in those predisposed.

You will observe that all of the exciting causes mentioned above are preventable causes. There are a few exciting causes which are not preventable, such as injuries to the brain and local inflammatory conditions of the brain and its membranes, together with certain general bodily diseases, but these cause very little of the insanity.

The other phases of the problem which confront us now, is how are we to increase the number of discharges from our insane hospitals and make those remaining therein approximate self-support. I can see but one answer to these questions and this answer is, by education. The insane in our hospitals, for the sake of convenience, can be divided into acutely insane, epileptics, chronic insane, and idiots. Many of the acutely insane, as at present treated or without any treatment, will recover and return to their homes. The best treatment for them, however, is rest in bed, and they should always be put to bed when they first enter the hospital; they should all receive good nursing by trained nurses, a carefully regulated diet,—all hospitals should have an expert dietist,—a regulation of the elimination, which is best obtained by warm baths, long continued and frequently repeated, also stimulating baths of various kinds, with a very small amount of properly prescribed drugs. This system of treatment will restore the majority of this class of patients. For the care of these patients the hospital department should be made a hospital in the fullest meaning of the term, because they are much in need of scientific hospital treatment.

The epileptics who enter the insane hospitals are not in need of hospital treatment, for they are all incurable. In the first place, they should never be sent to a general hospital for the insane, but should be segregated in a colony for epileptics only. The major portion of them are not insane excepting immediately preceding the time of having, or immediately following, their seizures. Treating them as insane is detrimental to them and the effect of their seizures is very bad upon the other patients. If placed in a colony by themselves the per capita cost of their support can be very materially reduced as almost all of them can work if given the opportunity, and their ability to work is about equal to the ability of an equal number of men in a normal condition, excepting when they are disturbed as a result of their seizures, which occur very rarely in many. They of course should have their energies intelligently

directed and many of them will need special training, but above all things, the epileptic needs an opportunity to work; not to restore his mind, but to make his life in the institution more bearable, to lessen the number and severity of his seizures and to render him less of a burden to the State which must support him.

The idiots in our State hospitals are of course incapable of much intellectual development, but with proper training they are all capable of being sufficiently trained to make them useful in various ways around the hospital.

The so-called chronic insane should be subdivided into three classes: the progressively incurable dements, such as the paretics and senile dements; the physically helpless, such as the paralyzed; and those that are neither physically helpless nor have progressively incurable dementia. The two former classes constitute a small percentage of the hospital population and about all they need is kind treatment, good nursing and careful attention to their physical needs. This they get in most, if not all of our State hospitals. The greater percentage of the population in our State hospitals is composed of a class of persons who have entered the hospital as acute patients, have not been restored and are left over, as it were, from year to year, until there is a large accumulation. These people are not sick, but are in good physical condition. They do not need hospital treatment, excepting occasionally as one of them has an acute attack of sickness of some character. They eat and sleep well and are in fairly robust health. In most of our hospitals they live a very monotonous life. Such a life as they live is not conducive to their restoration. The majority of them do nothing but eat, sleep, sit in the wards and occasionally take a little outdoor exercise, with no opportunities for social intercourse excepting with other insane persons. Should we be surprised that we are not discharging more of this class of insane? For them the insane hospitals are nothing more than jails and their only function is custodial. I will agree with you when you say they are housed in good buildings, of which we are all proud, and the buildings are kept clean. They are treated kindly in most instances, are fed food of good quality and ample quantity, are kept warm, well bedded and are furnished with some amusement. But is this all we owe them? A humane man will do as much for his dog or horse. We have made very little progress in the treatment of this class of patients in the last one hundred years. We are perhaps more humane in our treatment of them and have made some improvements in sanitary regulations, but I consider our treatment of them now as being inhuman in the extreme. The state of the criminal in the penitentiary is much better, as he is given the opportunity and facilities with which to work and receives training for mind and hands, while the insane must live alone with his delusions and a mind concentrated on the ego. It is not surprising that these patients frequently become violent and have to be restrained by mechanical means and sedative drugs. What they need and want is mental and

physical occupation; in order to develop the undeveloped child we give him occupation for all of the faculties of his undeveloped mind and work for his hands. This development of the undeveloped mind we call education. The class of insane which we are discussing had, before their acute attack of insanity, developed minds; as a result of their insanity they have suffered a mental reduction until many of them are of the apparent development of small children, and they must be re-educated and re-developed. They must be given occupation for all the faculties of the mind and work for their hands. Some of them show very little mental reduction and likewise very little perversion of mental faculties; others show great mental reduction and likewise great perversion of mental faculties. Those that show the greatest amount of mental reduction should be treated as very small children who are beginning on the first principles of education. They should be given a kindergarten course just as the small child, with about the same course of study. Those who have suffered less mental reduction need not begin with the fundamentals, but they can begin a little farther along in the course, which should be progressive in character and should be systematically carried out. In addition to the kindergarten department there should also be a well equipped manual training department. These departments should be directed by well qualified teachers. Every insane hospital should have a well furnished general library for the patients' use. These patients should be encouraged to read wisely selected books, and brought together at certain intervals by a competent teacher to tell what they have been reading. They should also under the direction of a well qualified teacher be given a course of ordinary school study such as the average child gets in our public schools. The treatment of the class of patients under discussion as suggested would open the door of their prison to scores on whom it is hopelessly closed if they are treated as at present.

The most important part of their treatment, however, is the manual training department and ordinary labor. A course in a well equipped and well directed manual training department is, perhaps, the best method of producing all around mental and physical development. Every faculty of the mind as well as the hands are exercised and developed. An industrial building for the industrial re-education of these patients is very essential. In such a building the clothing of all the patients can be made, mattresses manufactured, furniture repaired and much new furniture made, etc. Such a building will pay in money saved the institutions which is now spent for such supplies as can be made by the patients.

Many of the women patients are now employed in all of our hospitals in the wards, laundry, kitchen, dining-rooms, etc., while many of the men are employed on the farm, in the dairy, repair work on the buildings, cleaning the campus, building fences, working in concrete, road building and, in short, doing about everything and every kind of work there is to do.

During my superintendency of State Hospital No. 3 (Nevada) our

male violent ward built two miles of the best dirt road in Vernon County, with picks and shovels and did all manner of ordinary and extraordinary labor, and did it well.

The women in the wards should be taught to do crochet and embroidery work, basket making,—anything to keep them employed. They all need what we have not been prepared to give them, occupation, occupation, occupation, it is their only hope. It does not always restore, but it makes life more bearable for them.

I have seen industrial re-education restore and open the hospital door where it seemed as though restoration was impossible.

Amusement and recreation for the patients is of so much importance that these should be provided with as much regularity as the food. I regard the use of the moving picture machine as one of the best possible ways of amusing and entertaining. Its operation, however, is attended with considerable danger and should be very carefully manipulated. Band concerts, dancing, ball playing and all forms of athletic sports not only furnish amusement, recreation and mental diversion but they assist very materially in re-developing and re-educating as well.

There seems to be a popular impression that the insane are useless members of society and cannot be educated. This is a grave mistake as many intellectually superior people have at some time in their lives been insane, and many who exercised a marked influence upon their country and time have been insane during part of their lives and semi-insane when not wholly insane.

Boards of managers of the hospitals should be educated upon the usefulness of the chronic insane and should be encouraged by legislative enactment to use them in building new buildings instead of having them built by contract at enormous profits to the contractors and quite frequently to the detriment of the buildings. I believe a conservative estimate of the saving which could in this manner be made upon all new buildings would be 33⅓ per cent. and the benefit which the patients would derive from the work cannot be estimated in dollars and cents; but it would certainly be very great.

I trust this Conference will go on record with a recommendation that all of our State hospitals be made, instead of jails for the confinement of the class of insane referred to in the above, educational institutions in the fullest possible sense, and that a campaign of education be inaugurated in the education of the public upon the nature and causes of insanity and the manner of its prevention, as well as a campaign to the end that we may get such legislation as will make it possible to give the patients the full benefit of education.

OTITIC SINUS PHLEBITIS AND THROMBOSIS; WITH REPORT OF A CASE OF PHLEBITIS AND THROMBOSIS OF LATERAL SINUS AND JUGULAR BULB.*

By W. E. Sauer, M. D., St. Louis, Mo.

The venous channels of the brain which are most often involved in a suppurative inflammation of the middle ear and mastoid cells are, in the order of their frequency: 1. The lateral sinus. 2. The superior and inferior petrosal sinuses. 3. The cavernous sinuses. 4. The bulb of the jugular and jugular vein. Sinus phlebitis and thrombosis occur more frequently in cases of chronic middle ear suppurations than in acute forms, and frequently run their course without any other intracranial complications. At times other intracranial complications may occur, such as extradural abscess, meningitis and abscess of the cerebellum.

The extension of a middle ear suppuration to the brain or its coverings, occurs in the majority of cases when the bone has become diseased to the dura; should the dura become involved, a meningitis, sinus thrombosis or brain abscess is the result. Should the dura not become involved, an extra dural abscess is the result. The reason why there is a diffuse meningitis in one case, and a more circumscript inflammatory process, such as a subdural abscess in another, depends on the greater or lesser virulence of the infectious material. The lesser virulent infections have a tendency to adhesive inflammation, which, through the adhesion of the mininges, prevents the spreading of the infection; while in the more virulent infections, the extension of the inflammatory process is so rapid, that there is not sufficient time for the formation of these adhesions.

An infectious sinus thrombosis results when the inflammation has extended as far as the intima of the venous channels of the brain. When a disturbance of the endo-thelium of the intima takes place, the formation of a thrombus is the result. A thrombus can be theoretically considered as benign; but according to Gruenert, should always be regarded as malignant. A thrombus may develop into a solid mass, which may be converted into connective tissue, but as a rule, owing to the entrance of the infectious material, the thrombus becomes broken down, and the sinus may be partially filled with purulent masses or even pus. The thrombus may be confined to a small area of the lateral sinus, or it may extend upward to the torcular herophile and even into the longitudinal sinus, or downward to the jugular and vena cava. It may also

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extend to the petrosal or cavernous sinus. In some cases we may find the thrombus organized for a certain distance, and in another portion it may be broken down and infiltrated with pus. The wall of an inflamed sinus or the jugular vein rarely shows a normal appearance. At times there are marked changes such as, a yellowish green color, a purulent infiltration, considerable softening, gangrenous, and even perforated.

The symptoms of a sinus thrombosis are often not characteristic. According to Jansen, an otitic sinus thrombosis, even with a purulent thrombosis, may cause no symptoms. As a rule, however, there are such symptoms as headache and vomiting, and as the disease progresses marked depression is noticed. The most characteristic symptoms of a sinus phlebitis and thrombosis are severe chills and high fever, with a rapid decrease of the temperature. There may be several remissions of the temperature during the same day. The tongue is dry and coated. The pulse is rapid, small and of low tension. The skin is dry, and the spleen enlarged. The patients are usually conscious to the end. Other symptoms occurring less frequently are, stiffness of the neck, optic neuritis in about 50 per cent. of the cases. According to Jansen, when the thrombus has extended to the internal jugular vein, there is a painful cord like swelling at the side of the neck. If the thrombus extends to the facial vein, edema or swelling of the eye-ball occurs. If the petrosal or cavernous sinus becomes involved, engorgement of the vessels of the orbit with exophthalmos, disturbance of vision, edema of the eye lids, paralysis of the motor occuli, abducens and trochlear nerves.

The diagnosis of otitic phlebitis and sinus thrombosis is frequently not made, especially when the causal suppuration in the middle ear is overlooked. This can occur very easily, especially when the discharge from the ear is, or has always been very slight. This condition can be mistaken for typhoid, miliary tuberculosis or malaria. The course of the disease is very irregular. Death may occur in a few days from collapse or metastasis in the vital organs, or the patient may linger for months; death resulting from a general pyemia.

The prognosis of the otitic sinus affections is, thanks to the modern method of treatment, much more favorable. According to Koerner's statistics of 314 cases, 180 of these cases were saved by operations; that is, more than half of the cases recovered. The prognosis is less favorable when the thrombus has extended to the jugular vein, and when metastasis has formed in the lungs, or when the cavernous sinus and other intracranial complications are present. The treatment is always surgical. Zaufal, in 1880, was the first to suggest the surgical opening, and removal of a thrombus from a diseased sinus; but not until four years later did he attempt this on the living, but his patient died fourteen days later from a pleuro-pneumonia. Lane, in 1888, and Balance, in 1890, were the first to report successful cases. Since that time Koerner was able to gather reports of 314 cases.

The usual methods of procedure in operating on the lateral sinus, is

to remove the bony wall of the sinus after the completion of the simple or radical mastoid (depending on the case). Enough of the bone is removed so that the sinus can be thoroughly inspected, that is, as far up as the knee, and as far down as the jugular foramen, about 3/5 cm. The normal sinus wall has a bluish appearance and pulsates. The diseased sinus wall has a yellowing appearance and the pulsations are absent; however, in the case of a hollow or cylindrical thrombus the pulsation may still be present. The character of the contents of the sinus can, according to some authorities, be determined by aspirating the sinus with a trocar. This method is recommended by Politzer. If clear blood is aspirated and then only mild pyemic symptoms present, the sinus does not necessarily have to be opened, as the thrombus may be absorbed. After the infection has been removed from the temporal bone, other authorities regard the aspiration of the sinus with a trocar as a dangerous procedure, as the sinus can be easily infected in this way. After one has decided to open the sinus, it can best be done with a pointed bistoury and the wound enlarged with a scissors; the thrombus can then be removed with forceps and curette. The upper portion of the thrombus is removed first. This must be followed up until a free flow of blood occurs. The sinus is then packed with iodoform gauze, and the lower portion of the thrombus is carefully removed. This must be very carefully done, owing to the danger of air aspiration into the vein, and a dislodging of the thrombus. Politzer and Whiting introduce a gauze tampon between the sinus and the bone. Gruenert and Balance always ligate the internal jugular vein before they open the sinus. Voss freely exposes the sinus and cuts away the wall beyond the ends of the thrombus, but does not disturb the thrombus. The question of ligating the jugular vein is still being debated. In Koerner's statistics of 314 cases, the vein was not ligated in 132, yet there were 58.3 per cent. of recoveries. In 94 cases the vein was tied before the sinus was opened, with 59.6 of recoveries. In 69 the vein was tied after the sinus was opened, with 59.9 per cent. recoveries. According to these findings, the results are practically the same; showing that the results do not depend on a certain method, but on how early the case is operated upon. In 120 cases the operation was done during the first week after the appearance of intra cranial complications; of these 75 recovered. In 80 cases in which the operation was done during the second week, only 27.5 recovered.

In those cases in which the phlebitis has extended to the jugular bulb and vein, the ligation of the vein is imperative. Many authorities not only ligate and divide the vein, but resect other portions of the vein.

At this point I wish to report briefly a case of thrombosis phlebitis of the lateral sinus, and the bulb of the jugular vein. The case was that of a girl 1 3years of age, who was sent to the medical ward of the Mullanphy Hospital, in the service of Dr. Elsworth Smith. The patient entered the hospital on June 15, 1908. The following history was noted

by the interne in charge: Illness commenced one week ago with chill and fever, no appetite, and discharging ear. The temperature had been variable, ranging from 99° to 105°; frequent chills, complained of pain over right mastoid and down right side of neck.

Physical Examination. Patient pale, teeth covered with sordes, face shows evidence of pain, head moderately retracted, knees drawn up on abdomen, unable to flex head on trunk, abdominal muscles held rigid, tender over abdomen, no rose spots, spleen enlarged on percussion, Kernig's sign present, no Babinski, no ankle clonus, abdominal reflexes exaggerated, knee jerk present, tasche cerebral, tender over mastoid.

About 7 p. m. I saw the patient and found the temperature 105°. She was conscious and was able to give fairly intelligent information regarding her history. I learned that she had been subject to attacks of pain in the right ear, at irregular intervals, and at least on two occasions the ear had discharged for several weeks, but that there had been no discharge for a year or more. The present trouble began with severe pain in the right ear a week ago, and during the past few days had had pain over the mastoid region. The aural examination revealed a slight purulent discharge. The drum membrane was bulging, and there was some sagging of the upper posterior canal wall. There was also marked tenderness with some edema over the mastoid, with tenderness over the course of the jugular vein. I made a diagnosis of an acute mastoiditis with possible phlebitis and thrombosis of the lateral sinus and jugular vein. The drum membrane was freely incised and hot irrigations ordered. The following morning I found that the temperature had gone down to 99.6°, and the general condition of the patient was decidedly better; the ear was discharging freely, but there was no marked change in the mastoid condition. Examination of the urine by Dr. Barry revealed a slight trace of albumen, the Widal was negative and no plasmodia were found in the blood. Dr. Alt made an ophthalmoscopic examination and found a haziness of both discs. During the afternoon the temperature went up to 104.8°, although there was no history of a chill. I decided to open the mastoid. The bone was found to be necrotic down to the dura, and there was also an accumulation of pus between the dura and the bone; that is, a peri-sinus abscess. The sinus was fully exposed, but the wall of the sinus did not show any decided changes, and pulsated normally. I decided not to open the sinus. The wound was dressed in the usual way, and the patient was sent to bed. That night the patient had a severe chill; the following day there was no apparent change in the general condition of the patient, except that she appeared very drowsy and slept most of the time. The temperature ranged between 99.6° and 104°. The next morning Dr. Alt made another ophthalmoscopic examination and found a decided improvement in both discs. There was, however, no corresponding improvement in the general condition of the patient; on the other hand, she had a very anxious

expression, and complained of pain in the neck, but owing to the improvement of the ocular findings I decided to wait. On June 22, the fourteenth day of the illness, the patient had a severe chill; temperature 104.8°, pulse 120. Kernig's symptom was present and the reflexes markedly exaggerated. She complained of pain in the back of the neck, her tongue was heavily coated. I then decided to open the sinus. The patient was removed to the operating room, and the sinus fully exposed; there was no pulsation to be made out. I then incised the sinus and found it thrombosed. On removing the upper portion of the thrombus, a free flow of blood ensued; this was controlled in the usual way, by packing the sinus with gauze. The lower portion of the thrombus was broken down and at least a teaspoonful of pus was evacuated from the sinus. It was found that the thrombus extended down into the jugular bulb. I then decided to ligate the jugular, and to expose the bulb fully before attempting to remove the thrombus. The jugular was then ligated low down in the neck and divided; a number of enlarged lymphatic glands along the course of the jugular were removed at the same time; the jugular bulb was then fully exposed and the thrombus removed with a curette. A fair amount of bleeding followed. A portion of the sinus wall was removed with a scissor, and the wound was packed with iodoform gauze and dressed in the usual way. Immediately after the operation the pulse rate ranged from 160 to 180. The patient spent a very restless night, but the next morning the pulse had gone down to 132, temperature 101.6°. At noon pulse 104, temperature 98.3°. The general condition of the patient gradually improved. The outer dressing was removed three days later, but the gauze tampons in the sinus were not removed until the second dressing, two days later. There was no hemorrhage following the removal of the tampons; the dressing was then changed daily. During the convalescence the temperature was 97° to 100.4°. The wound gradually closed. The patient left the hospital on July 24th. The mastoid wound had entirely closed and the hearing was normal; she had fully regained her former health. The ocular examination at this time showed a slight haziness of the right disc; the left was normal; there was no interference with the vision.

One of the interesting points in this case was, the extensive involvement of the mastoid cells, and the presence of an extradural abscess, one week after the beginning of the illness. The patient was positive that there was no pain or discharge in the ear prior to one week before she entered the hospital. There evidently must have been an inflammatory process in the mastoid for some time previously, or there might have been a slight discharge from the ear which the patient overlooked.

Another interesting point in the case was, the marked improvement in the ocular findings following the first operation, in which the sinus was not opened. The haziness of the disc was decidedly less on the second morning after the operation. This improvement took place in

spite of the presence of a septic clot within the lateral sinus. I would undoubtedly have opened the sinus at least forty-eight hours sooner, if I had not taken the ocular findings as an evidence of improvement.

Humboldt Building.

ACCIDENTAL REMOVAL OF THE STAPES.*

By F. C. Simon, M. D., St. Louis, Mo.

Since our interest pertaining to anything dealing with labyrinthine affections has been greatly stimulated during the past few years, by the great strides taken in that direction, we should gladly welcome experiences that have to do with conditions of the internal ear.

The case that I am about to report, "The Accidental Removal of the Stapes," is of interest, because an opening was established with the vestibule, in the presence of a chronic suppurative otitis media, this condition almost inviting infection, and yet the patient happily escaped any of the very grave consequences that might have occurred.

History. During December of 1906, Tom M., age 14, called at the Ear Clinic of the Washington University Hospital for treatment. He stated that he had had a discharge from the left ear for the past six years but was unable to give the supposed cause.

Examination. The middle ear and canal were filled with a profuse, fetid, purulent discharge, and after this was removed the drumhead was found to be completely destroyed, excepting a very narrow margin. The short process of the hammer was visible but a portion of the handle was missing. The labyrinthine wall was studded with an abundance of granulation tissue. The hearing test on this side showed that the whispered voice was heard at a distance of two feet, watch about three inches. The Rinne's test was negative and the Weber was referred to the left. The nasopharynx was normal.

Treatment. A course of expectant treatment was employed for about two months. Very little improvement followed, the discharge only becoming slightly lessened and more serous in character. As the appearance seemed to point to carious ossicles, it was deemed advisable to see what the removal of the malcus and incus would do. So ossiculectomy was advised. The operation was performed under local anesthesia. The remaining portion of the malleus was extracted without any difficulty, but when an attempt was made to remove the incus it seemed to be wedged high up toward the antrum and impossible of dislodgment. After several

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unsuccessful attempts at its removal the search was finally abandoned. The granulations were carefully removed by means of a biting forceps. By subsequent swabbing of the ear, the stapes was found dislodged and clinging to the cotton on the applicator. It was entire.

The patient complained, immediately following this, of dizziness, and had to be led from the operating chair and placed in a recumbent position. Vertigo continued in this position but gradually lessened until after the elapse of half an hour he was placed in an upright position. Spontaneous nystagmus was observed, vertigo was still present and his gait was unsteady.

Patient refused to remain at the hospital and went home, accompanied by his mother. Absolute rest with application of ice to the head was ordered. The following day a slight degree of vertigo still existed, there was no nausea, nor any fever or headache. Wound was dressed and found to be clean. On the third day dizziness had subsided and on the fourth day the patient was allowed to get out of bed. After this the recovery was uninterrupted as far as the labyrinth was concerned.

The middle ear condition was improved, but still some serous discharge remained after several months' treatment. The radical mastoid operation was advised but refused.

The hearing was slightly impaired by the operative interference. Whispered voice after the operation was heard only one foot as against two feet before the operation. The distance for the watch was also greatly lessened.

In a stapedectomy, the presence of pus in the middle ear is a menace, and one would naturally expect an acute suppuration of the inner ear to follow. In this case, however, there was no trace of any such disturbance.

The patient was last seen about a year ago, which was two years after the operation, and at that time he was in good condition. At no time after the primary dizziness disappeared was there any attack of spontaneous dizziness, nor was any dizziness brought about by sudden head movements or active exercise.

Fortunately the internal ear is quite resistant to infection but perhaps not as much so as we have been led to believe. No doubt the practical application of the knowledge of the static labyrinth for diagnostic purposes as it has been developed by Neuman, Barany, Alexander and others, will convince us that labyrinthine complications exist where they are thought to be absent.

DISCUSSION.

Dr. Schutz, Kansas City, asked what was the nature of the vertigo.

Dr. Simon replied that there was a tendency to rotate toward the affected side.

Dr. Schutz said he had treated a similar case with the vertigo much more pronounced, accompanied with nausea and vomiting more or less

constant for five days after removal of the stapes. The character of the vertigo was a tendency to rotate toward the affected side around the vertical axis. Patient could not raise his head from the pillow or move his head toward the healthy side without bringing on severe paroxysms of vertigo and vomiting. It was fully three weeks before these symptoms entirely subsided. Another marked condition was rapid loss of flesh although this, of course, could be accounted for by the more or less constant retching and vomiting subsequent to the operation.

Dr. Simon said that in Dr. Schutz's case the nausea was probably brought about by the cholesteatoma causing some internal ear excitation. In his case the sudden removal of the stapes probably caused a labyrinthine irritation, but not a labyrinthitis.

SOME PHASES OF LABYRINTHINE DISEASES FOLLOWING MIDDLE EAR AND MASTOID SUPPURATIONS.*

By C. F. Pfingsten, M. D., St. Louis, Mo.

The membrana tympany secondaris closes the fenestra rotunda and it is this membrane which is very often endangered, especially in otitis media following scarlet fever and measles, when the pressure of the exudate in the tympanic cavity is not relieved by early uaracentesis or spontaneous rupture of the tympanic membrane. Destruction in the region of the round and oval windows occurs most frequently after scarlet fever and tuberculosis of the middle ear. During a scarlet fever otitis destruction and invasion of the labyrinth occurs most frequently during the height of the disease and thus the symptoms on the part of the labyrinth, *i. e.*, dizziness, nystagmus, vomiting, etc., are often overlooked. Usually the first symptoms observed are loss of hearing or the onset of inter-cranial complications. In suppurations of the labyrinth recovery sometimes takes place but always with the loss to a greater or less extent of the accustic function, or in other cases the suppuration may extend along the accoustic nerve or the aqueduct to the bram, with a resulting meningitis or brain abscess as the consequence.

As a prophulactic measure it is of paramount importance to institute a paracentesis in all cases of scarlet fever otitis as soon as the slightest indication of involvement of the middle ear and especially should no time be lost if exudation is present. Procrastination in doing a paracentesis in these cases is little less than criminal. To wait for a spontan-

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eous perforation of the tympanic membrane means not only the jeapordizing of our patient's hearing but his life as well. Many a life would be spared and the number of deaf mutes diminished if this salient truth were more generally appreciated. Every practitioner and especially those more or less distant from a specialist should have the proper knowledge and equipment to do a paracentesis properly. Fistulous tracts are most frequently observed in the horizontal canal during the mastoid operation where it projects into the antrum. More frequently they are caused by pressure from cholestome than by active inflammation of the bone. These cases are of gradual progression and operative interference is attended usually with complete recovery. It is of prime importance to institute the various tests as laid down by Barany to establish the functionating power of the labyrinth, and by thus doing we can readily tell whether or not and to what extent the labyrinth is involved.

As soon as the end nerves of the static labyrinth are involved we have loss of hearing, disturbances in equilibrium without dizziness and nystagmus. In those cases of latent labyrinthitis the danger of the cranial content is increased by the concussion produced by the mallet during the operation by which means the suppurative material is prone to travel along the avenue of predilection, namely the acoustic nerve and aqueduct to the brain. In these cases it is of great importance to do the radical as well as the labyrinth operation or else neither. The practice of opening a fistulous tract, for instance, in the horizontal canal while doing the radical operation and thus being content or taking it for granted that there is no infective material elsewhere in the static labyrinth, not withstanding the fact that many cases do recover with such limited surgical intervention is nevertheless an inefficient surgical procedure. When operating on the labyrinth either remove it entirely or don't touch it at all, for the smallest amount of infection retained within the labyrinth after operation on the semicircular canals, vestibule of cochlea, is exceedingly dangerous to the cranial contents. The mortality in chronic suppurative otitis media usually following a scarlet or measels infection, where the necrotic process is allowed to go on until exfoliation takes place, is more than twenty per cent. which in the light of modern otological surgery is very high. Thus it behooves us to thoroughly acquaint themselves with the modern means of differentiating the cases in which removal of the labyrinth is the only procedure that will save the life of our patients. Jensen, Barany, Alexander and Neuman have pointed out the way; thus let us not be content to follow along the new paths surveyed by these great lights in otology but ever press on with that true American spirit until the day will not be far distant when the otologist will take the front rank among the brain surgeons of his day.

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DISCUSSION.

Dr. M. C. Shelton, of Joplin, said, if the suppuration was in the attic, a free incision might relieve the symptom, especially if accompanied by incision of the mucous membrane.

Dr. Scholz, St. Louis, believed in early paracentesis in otitis media, where the presence of exudate causes symptoms. He did not, however, favor the incision of the mucous membrane on the promontory, in view of the fact that the bony wall of the labyrinth at this point is devoid of diploe, receiving its blood supply mainly from the mucous membrane over its tympanic surface and from the membranous labyrinthine wall within. Interference with this source of blood supply might disturb the nutrition of the bone so as to endanger its vitality. The promontory and the prominences of the lateral semicircular canal are the favorite seats of fistulæ of the labyrinth. Fistulæ may be complete or incomplete, extending through the bony wall to the membranous labyrinth or into it. The incomplete form does not necessarily indicate a labyrinthine operation, this form usually heals after proper drainage has been established. This class usually gives the reaction known as the fistula symptom, a vestibular reaction brought about by compression or rarefaction of the air coming in direct contact with a functionating labyrinth. This test, so very valuable in diagnosis, is made manifest by a characteristic ocular movement.

Dr. Carl Barck, St. Louis, did not agree with Dr. Pfingsten, that the whole labyrinth should be removed. In labyrinth affection, either one of the semicircular canals or the vestibule, or both, are affected. Where one of the semicircular canals alone was involved, it alone should be operated. He reported a case of involvement of the superior horizontal canal which he operated in this manner and which recovered fully.

Dr. Ewing, of St. Louis, agreed with Dr. Barck that many labyrinth affections would get well if left alone. The labyrinth could not be cleaned absolutely and a partial operation would be insufficient.

METHODS OF CLINICAL TEACHING IN OTOLOGY.*

By Selden Spencer, M. D., St. Louis.

The subject of teaching may not appeal to all as being of particular interest, but it is of vital importance to our profession and it has occurred to me that it is one that is too often overlooked in our discussions.

In times past our graduates have too frequently gone forth to battle in the field of medicine, wholly unprepared for the work which they have in hand and their practical experience has had to be obtained by a protracted hospital experience or a long apprenticeship. We can not hope

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to perfect our medical schools so that we may turn out physicians fully prepared with practical training as well as academic, but we can aim to strengthen our undergraduate courses and give our embryo physicians a firmer foundation on which to build that superstructure which is to house the knowledge and experience on which they will make daily call.

In any branch of work we must have two kinds of teaching, the theoretical and the practical, and the importance of either must not be underestimated. The man whose training has been purely practical is an empiric; the man whose training has been purely theoretical is a doctrinaire. But the man who has studied the theory and has learned its application is ideally trained and eminently fitted to take up his work.

The properly trained physician must have had instruction in all branches of medicine and, while it may be his wish to specialize and devote most of his time to a favored branch later on, his training in college must be general to give him the proper foundation on which to build this special knowledge.

As all men cannot be universal specialists we must give careful consideration to the quantity and quality of the teaching in the special branches. As to how this teaching should be conducted, what we shall say of clinical teaching in otology will apply in a limited sense at least, to all the special courses.

A course of didactic lectures with required examinations, demanding collateral reading, is sufficient preparation for the clinical course. With this theoretical foundation the student is prepared to enter on his course of practical instruction, but without this practical instruction his theoretical work will stand him in little stead when he attempts actual work. In otology the physical examination is the most important feature, if not the essential one, for without the ability to make such an examination a man is absolutely unfitted for ear work.

Whatever variations there may be in methods of clinical teaching, they must follow one of two main lines. Either the cases must be demonstrated before the class, or section, or the cases must be turned over directly to the student for him to diagnose and determine treatment. These two methods I wish to compare, and in doing so to make a plea for the latter which, I am sorry to say is, I fear, the rarer in this country.

The demonstration method consists in giving the class a short talk or lecture on a certain ear condition, after which a case is exhibited. One, or perhaps two or three such cases are on hand and the students are formed in line to pass by and have a look. With the whole class or section, to examine a few cases, the student is hurried and when asked if he has seen what he is expected to see his answer is invariably "yes." The student is led to say that he *has* seen even though he may have seen nothing at all, or if he has seen, he has no idea of the significance of what he has seen. Pressure is brought to bear to elicit this

answer. He fears that if he spend more time than the others think reasonable he will be looked on as a grind, or one who is trying to make an impression on his instructor. Or at least as one who is extremely selfish and is taking up the valuable time of the rest of the class; he occasionally is even hurried by the impatience of the instructor who is anxious to give all a chance. By such a method the time of the instructor and that of the student is limited. Consequently interest to some extent flags and technic can never be developed.

The demonstration method can be improved on, however, and made more valuable and instructive if a clinic is properly equipped for it. If there are enough chairs and lights to seat several patients so that each man may take his time with a case and pass on to the next, the instructor, with one or two efficient assistants, can give more time to each man and hurrying may be eliminated. Drawings indicating what each case represents may be placed near the case and the work of the men can be overseen so that much may be learned as to methods of inspection and pathological conditions. However, at its best the demonstration method can never be made as valuable as the method which we are about to consider.

We are assuming that the lecture course in the third year has prepared the student to enter on his practical work in the clinical course. No general lectures are given. All instruction is given individually. The chief difference in this method from the demonstration method, as we have chosen to call it, is that we turn the patient over to the student without comment on the condition of the case. He is asked to question and examine the patient and determine in his own mind whether the trouble is located in the external, middle, or internal ear, and to what class of ear affections it belongs. Further he is asked for a complete diagnosis and for his advice as to treatment and prognosis. Wherein he fails he is set right. To give him better practice in interpreting what he sees and to be further sure that he really sees, a drawing of the condition of the drumhead is required in all middle ear cases. In the early part of the course, cases are selected until a variety has fallen to the lot of each student; then later on cases are taken at random. The understanding that all work will be graded acts as a stimulus.

It is our aim in the undergraduate course in otology to turn out physicians who are able to make an intelligent inspection of the drumhead, the tympanic cavity and the entire otitic region. It is not our aim to turn out finished ear specialists.

Particular stress is laid on diagnosis. The essential thing in any branch of medicine is diagnosis; manifestly we cannot institute proper treatment unless we are sure of the condition that we are handling and are familiar with it in its different stages. Students have opportunity to carry out the simpler methods of treatment, but the importance of diagnosis, and methods of examination and technic, are more particularly dwelt upon.

Students are apt to insist on giving a good deal of time to therapeutics, and of course we cannot neglect this important subject, but we feel that the short time allowed can be better used by devoting it to technic and examination, as being more unchanging, and more difficult to obtain a working knowledge of through textbooks. It is evident that it is not advisable to turn surgical cases over to students, though they should be made familiar with the operations in use and have opportunity to see all major and minor operations which arise. Surgical dressing cases should be referred to the students.

To be properly equipped to carry out these methods of instruction, it is necessary to divide the clinic room into a number of compartments, or alcoves, so that each student may have his own compartment and be practically alone with his patient until he is ready to report to the instructor. These alcoves should be equipped with a strong artificial light, instrument case, table chairs for patient and physician, and with all the necessary instruments. A nurse should be in constant attendance, and the necessity for asepsis is impressed on the students by being strictly enforced; all instruments are to be sterilized as soon as they have been used.

In this alcove the student is thrown on his own responsibility. He may question the patient at whatever length he deems necessary, and must from the history and examination reach his own conclusions. He must then report to the instructor who directs him. At the start the simplest cases are given and it is explained how the pathological conditions are to be classified and how we are to go about finding the nature of the patient's complaint.

Of course at first the novice is awkward and sees little or nothing, but as time goes on his technic is improved and his knowledge of the subject in hand becomes visibly broadened. From the start his weaknesses are dwelt upon and corrected. At first he needs much help but he handles each case somewhat better than he did the last.

The advantages of this method must be obvious. It is possible to tell just whether or not the student is learning anything, not by an examination after a given interval but at each clinical hour his progress can be watched. He himself becomes more self-reliant and more interested in his work. Under the demonstration method half the class or more might go through the year without being able to see a drumhead. Under this method such a result is impossible.

The difficulties in the way of carrying out this method are the expensive equipment, the necessity either for many instructors or for small sections.

We have been carrying out this method in our clinic at the Washington University hospital. We have equipped the room with twelve alcoves supplied as I have described above. We always have at least three instructors on hand and aim to divide the class into sections of not more than nine or ten. A nurse is also always in attendance. We feel

that we can safely say that as a result of this method no one leaves our course without being able, at least to see the drumhead and to recognize the simpler pathological conditions. In fact most of them are much better equipped than this.

DISCUSSION.

Dr. Kelly, of Sedalia, said each otologist had his clientele of general practitioners, most of whom had no conception of conditions in the ear; so cases come in very badly diagnosed. The otological clinics should remedy this, but most students do not try to learn in the clinics.

Dr. Schutz, Kansas City, thought the methods of teaching otology in our American colleges have been more or less of a failure, at least have fallen short of what they should be, judging from the ignorance displayed by the average general practitioner of the structure of the aural organs. He complimented the essayist for the thoroughly modern and practical method of clinical instruction he had suggested and was particularly delighted to know that the doctor practiced what he preaches in his college work. Drawing as a means of instruction is not only valuable, but is absolutely essential; next to dissection it is the best method of teaching anatomy.

Dr. Lichtenberg, Kansas City, said it was astonishing to observe how little the general practitioner knew about the ear. He did not know how to handle the requisite instruments, much less how to do the delicate operations necessary. He thought that clinical instructions should replace the didactic.

Dr. Ewing, St. Louis, was glad to hear that Washington University was teaching otology so scientifically. He thought that individual instruction was the best method. The Metropolitan Throat Hospital, of New York, though small, gave good instruction; large clinics shove the patients through too fast, not permitting time for the mental digestion of conditions.

GLAUCOMA.*

By Flavel B. Tiffany, M. D., Kansas City, Mo.

Glaucoma is the name given to certain pathological lesions of the eye, which give rise to numerous symptoms due to increased intra-ocular tension. The word glaucoma (signifying sea green) is of pre-ophthalmoscopic origin and does not in any sense express the real pathology, except perhaps the apparent greenish color of the pupil and chambers. Hence a better name should be substituted, which would suggest the real pathology. Uveo-cyclitis would perhaps be better, but that sometimes exists without other symptoms, so for the present we are constrained to retain the old name.

Until recent years glaucoma constituted more than one per cent. of all disease of the eye, hence the great importance of the general practitioner being able to recognize it and give timely advice, that it may be checked before the vision is irremediably lost.

Glaucoma is a disease of the uveal tract, involving the ciliary region. The power of accommodation as a rule is the starting point, but sooner or later Fontana's spaces, the ligamentum pectinatum iridis, the iris itself, the ciliary muscle, ciliary ligament, with the entire uveal tract and Schlemm's canal, become involved. Some few authorities claim that the disease begins as a papillitis, but there is little doubt that true glaucoma has its origin in the uveal tract. It is sometimes associated with trigeminal neuralgia, which gives rise to excessive secretion of the aqueous humor, hence increased intra-ocular tension.

At the limbus (or sclero-corneal junction) are located the ciliary muscle, Fontana's spaces, Schlemm's canal, the root of the iris, with many blood vessels, nerves and lymphatics coming in and going out. The aqueous humor also has its exit at this region. Knowing of the many blood vessels and nerves coming to and leaving the eye through the ciliary region and Schlemm's canal, we can easily see that a blockade of the filtration angle will cause a retention of the aqueous humor, and produce an increased intra-ocular tension on which depends the symptoms called glaucoma. It is well known that the aqueous humor is contsantly flowing out of the eye at Schlemm's canal. This fact is well demonstrated in keratotomy when the aqueous humor is evacuated, causing the cornea to sink and reducing the intra-ocular tension. But in a few moments the fluid is replaced, the cornea assumes its tone and curvature, and the tension of the globe is re-established, showing the rapid secretion

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of aqueous humor which is going on all the time and is necessary to secure a healthy condition of the parts.

Glaucoma is generally a disease of middle or old age. As a rule it does not appear until after the presbyopic period, a greater per cent. of cases occurring between the fortieth and sixtieth years. It very rarely occurs before the twentieth year. I believe that the majority of cases of so-called glaucoma seen in children and young people are of mistaken diagnosis if not of traumatic origin. It occurs more frequently in females than in males. Emmetropic and myopic eyes are seldom attacked, the hypermetropic eye is the one that is subject to it. This eye is below the normal in size, having a cornea less than 11 mm. in diameter with a crystalline lens disproportionately large, with a shallow anterior chamber and a narrow circumlental space. The circular fibres of its ciliary muscle predominate almost to the exclusion of its meridional ones. In the hypermetropic eye, the power of accommodation is brought into requisition both for near and for distance objects and this constant strain and use is very liable to bring about congestion, which frequently ends in cyclitis, if not cyclo-iritis.

There are four stages of the disease:

1. Prodromal. 2. Acute, or primary. 3. The fully developed. 4. Degenerative stage.

In acute glaucoma the following twelve symptoms are usually present, viz: 1. Increased tension of the globe. 2. Rapid increase of any pre-existing presbyopia. 3. Venous hyperemia of the ciliary region. 4. Dilatation and sluggishness of the pupil. 5. Cloudiness of the aqueous and vitreous humors. 6. Periodic dimness of vision. 7. Appearance of a halo of prismatic colors about the light. 8. Contraction of the field of vision. 9. Ciliary neuralgia. 10. Anesthesia of the cornea. 11. Scotomata. 12. Arterial pulsation and cupped disc at the fundus.

Considering the symptoms separately we find first, that the patient complains of a fullness of the eye-ball, as though the globe were too large for the orbit. Gentle pressure upon the globe with the lids closed and the eye directed downward reveals an increased intra-ocular tension, varying from a slight perceptible degree to that of stony hardness. To what is this increased tension due? Occlusion of the filtration angle, as explained above, results in the retention and accumulation of fluid, producing this symptom.

2. Rapid increase of any pre-existing presbyopia. The patient finds it necessary to change his glasses frequently for stronger ones. What does this mean? It means that the ciliary muscle is involved and is rapidly losing its power of accommodation and causing an increase of the presbyopia.

3. Venous hyperemia at the limbus. The anterior ciliary veins become engorged and tortous, which is simply due to an increased tension, impeding the circulation of this part of the eye ball.

4. Dilatation and sluggishness of the pupil. Upon examination we find that the pupil is more or less dilated, according to the stage of the disease, and does not respond readily to the stimulus of light or to the act of accommodation. To what are these conditions due? The motor nerves or those from the lenticular ganglion supplying the ciliary fibers of the iris, pass through the ciliary region. These become involved and allow the sympathetic, which supplies the radiating fibers to gain a preponderance of power, resulting in mydriasis and inactivity of the pupil.

5. Cloudiness of the vitreous and aqueous humors. The patient complains of seeing specks or cobwebs floating before the eyes. The aqueous humor is found to contain leucocytes, epithelial cells with more or less granules of pigment. Upon examination of the vitreous it is found to contain pigment, corpuscles and striæ running through it, evidencing that some dissolution of the ciliary processes, or of the choroid, or of both, has taken place, resulting from the lesion in the uveal tract.

6. Periodic dimness of vision. The patient in the prodromal stage often complains of periodic dimness of sight. This is probably due to temporary disturbance of the intra-ocular circulation. This dimness can be easily produced by merely pressing the globe, showing that a very slight disturbance of this circulation will affect the vision.

7. The halo of prismatic colors around the light. This is one of the most constant symptoms of glaucoma, especially in the earlier stage. It differs from the ordinary halo in that the outer part of the ring is red, the inner a bluish green. This halo is seen only when the pupil is dilated and is probably due to a diffraction of the rays of light, owing to a change in the refracting power of the lens, especially at the periphery or at the portion near the ciliary region—the seat of the disease. Hence we refer this symptom to a lesion of the ciliary processes and muscle.

8. Contraction of the field of vision. The field is usually greatly limited. The contraction beginning in the equatorial portion of the globe, goes on to such an extent that the patient will describe his limitation of vision, as if he were looking through a tube. The most probable reason for this limitation of the field of vision, being of the peripheral portion, is that this is the part of the retina nearest the seat of the disease, also that the venæ vorticosæ leave the eye near its equatorial portion.

9. Ciliary neuralgia. This symptom in the acute form of glaucoma is always present throughout all the different stages. The patient complains of a sense of aching and a tightness of the globe, with a throbbing pain extending over the brows, through the temple and down the nose. The pain is most severe and frequently is referred to the back of the head, when it is accompanied by nausea and vomiting. Sometimes the pain is of an almost maddening character, causing the strongest man to quake and tremble in agony. This pain is due to the involvement of the sensitive nerves of this region.

10. Anesthesia of the cornea. This is quite a frequent symptom of glaucoma, more especially in the chronic form. The cornea becomes so

anesthetized that it can be touched with the finger or probe without occasioning the slightest pain. We have seen that the sensitive fibres supplying the cornea pass through the ciliary region, which is sufficient explanation of this phenomenon.

11. Scotomata, or blind spots, of which the patient occasionally complains, are usually due to hemorrhagic patches upon the retina, referable to the intra-ocular tension.

12. Arterial pulsation at the fundus of the eye and cupped disc. These symptoms, which the ophthalmoscope reveals, providing the media are sufficiently clear, are pathognomonic of glaucoma. In fact I believe that this pathological phenomenon must exist in order to entitle the conditions to the dignity of glaucoma. The glaucomatous cup involves the whole optic disc with the recession of the lamina-cribrosa, while the physiological cup is simply a shallow depression confined to the center of the disc. In the glaucomatous cup, the margin is abrupt, sharp and often excavated, and as the blood vessels curve over the edge, they appear interrupted and distorted. In different forms of papillitis, the cupping of the disc is not associated with recession of the lamina-cribrosa and there is loss of color at times amounting to chalky whiteness. The optic disc is usually encircled by a light colored band, which is due to the sclerotic shining through the atrophied choroid. At the margin of the disc, where the vessels wind over, a distinct arterial pulsation, synchronous with the heart's beat, may be present or induced by slight pressure on the globe.

The cause of these symptoms is evidently increased intra-ocular tension, and the reason of their location may be explained by the fact that the lamina-cribrosa is at the foramen-opticum where there is the least resistance.

Pathological Appearances. The cornea may be hazy, ciliary region congested, and the ciliary muscle hypertrophied. There may be shallowness of the anterior chamber, greenish color of the pupil with haziness of the humors of the eye; a cupped disc with recession of the lamina-cribrosa, an adhesion of the iris to the cornea with plastic exudates obliterating Fontana's spaces and blockading Schlemm's canal with destruction of the iridian angle. Occasionally there will be seen intercalary staphyloma at the limbus. In the glaucomatous cup the arteries wither and contract while the veins become large, engorged and torturous. There may be a pulsation of either the veins or arteries or of both, as they wind over the edge of the disc. Pulsating veins are not necessarily glaucomatous, but arterial pulsation with deep excavation and recession of the lamina-cribrosa, is always pathognomonic of glaucoma. The veins of the disc can not be seen with the same lens in the ophthalmoscope as those of the retina. To examine them distinctly a concave glass may be required, this part being of a myopic condition. The required glass would indicate the depth of the excavation.

Treatment. In the early stage of glaucoma a prophylactic treatment

is often effectual. The anomaly of refraction or accommodation is to be corrected by proper glasses. Since much attention is given to the correction of hypermetropia and astigmatism, acute glaucoma is fast disappearing. In my early practice, of more than a quarter of a century ago, scarcely a week went by without a case of acute glaucoma coming under my observation. Now I do not see more than one a month, although my practice is much larger than it was at that time. This fact I believe is due to the prophylactic treatment so universally prescribed in the correction of hypermetropia and hypermetropic astigmatism. I have found myotics very reliable in checking and aborting the disease. They contract the pupil and thereby draw the iris away from the filtration angle relieving the obstruction at Fontana's spaces and Schlemm's canal, permitting again the escape of aqueous humor, and so relieving the intra-ocular tension. As a curative treatment, eserine should be used several weeks until the intra-ocular tension has been restored to its normal. Adrenalin and dionin as exsanguinators and alteratives are reliable adjuvants. All use of mydriatics should be avoided, as their action is diametrically opposed to the desired results. They dilate the pupil and draw back the iris, folding it into the angle blockading the exit, more completely closing Schlemm's canal and the iridian angle. Indeed the use of mydriatics, from this very action, may induce glaucoma. When the disease is once established, there is but one treatment that offers any assurance of a permanent cure or relief and that is iridectomy or sclerotomy. The result of these operations in acute glaucoma have been brilliant. In the chronic form they will usually arrest the progress of the disease. If made in the earlier stages, they will often restore a portion of the vision, if not the entire amount lost. In the acute form the operation should be made as soon as possible, after the prodromal stage has set in. Every hour delayed may be valuable time lost; for this form of the disease often runs its course in a few hours, reaching full development. Among the operation for glaucoma, we might mention the following:*

1. Optico-ciliary neurectomy and extirpation of the ciliary ganglion. The latter was advised by Rohmer and requires a resection of the orbital wall. It is oftentimes difficult to find the ganglion and even when found and removed, the results have not been uniformly beneficial. This operation is only resorted to in cases of persistent pain, where it seems more advisable to make this operation than to remove the eye-ball. I have not been guilty of performing this operation.

2. Sclero-iritomy was first advised by Nicati. The section was made with a knife, which was carried through the conjunctival fold perpendicular to the plane of the iris. This operation has been practiced but little, and it is a question if it should be recommended. I would not advise it.

3. Irido-sclerotomy. This is an operation which is intended to detach the iris without cutting out a piece of it. It was practiced by Panas,

*Classified by Dr. Fridenberg in the Ophthalmic Record, 1909.

especially where the anterior chamber was shallow. The incision was made directly through the tissues of the iris both at the puncture and counter-puncture, thus really performing iridotomy. As soon as the point of the knife appeared in the anterior chamber, it was urged through the iris, carried on, pierced the iris again and appeared in the anterior chamber. Another operation, similar to this, was devised by Nicati. Instead of the knife piercing the iris it was carried across the anterior chamber at right angles and made to sever the iris at its attachment. In this, the iris is severed by a backward section from the anterior chamber.

4. Combined sclerotomy, devised by De Wecker. After making the incision with a keratome, the iris is grasped and pushed along the posterior surface of the cornea toward the center of the pupil until the adherent ciliary margin has been detached for a distance of 6 to 8 mm. Of course for this operation the iris forceps must be open when they are withdrawn from the anterior chamber, otherwise the iris might follow the instrument.

5. Incision of the iridian angle, advised by De Vincentiis. This operation is performed with a small sickle-shaped knife-needle, sharpened on the convex edge. It is applicable when the iris is rotten and difficult to remove. It is supposed to open Schlemm's canal and so relieve the filtration angle.

6. Sclero-choriodotomy. This consists in making an incision back of the limbus cutting through the root of the iris. This is attended with more or less hemorrhage and besides there is great danger of injuring the lens, and it does not guarantee any lasting filtration channel.

7. Cyclodialysis, advised by Heine, is an operation that has met with some favor. It consists in detachment of the ciliary body and iris from the sclera at the filtration angle, opening up the channel through the anterior chamber and the choroidal space. But this operation is attended with some danger of wounding the lens, and besides it is difficult to divide the sclera without injuring the ciliary body and having a prolapse of the vitreous. If the ciliary body is not injured during the incision, there will be no hemorrhage in the anterior chamber and the results may be good. However, a large per cent. of cases operated on in this way gain only temporary benefit, and there is a recurrence of glaucomatous symptoms. Mueller concludes that cyclodialysis, while it diminishes the tension in a number of cases, can not be considered preferable or even equal to iridectomy, but may be used in cases where iridectomy is contraindicated or has failed. Mueller thinks that this operation is applicable in cases of very shallow chamber, and in secondary glaucoma, where iridectomy has already been made. Several have reported good results from the operation, while others deprecate it.

8. Sclerotomy. This operation should be made under the influence of cocaine. A few drops of sulphate of eserine (¼ of one per cent.) are instilled into the eye before the operation. The section may be made at the superior or inferior part of the limbus. Enter the sclera with Von

Graefe's linear knife at one millimeter from the limbus, as if about to make the scleral flap in the extraction of cataract. The knife is pushed across the anterior chamber, making a counter-puncture at the point directly opposite its entrance, embracing one-third of the perimeter of the cornea. The knife is then urged forward, cutting with its point at the limbus, about one-third of the area embraced, and another third is cut with the heel of the knife on withdrawing it, leaving one-third uncut as a bridge.

Whereas the foregoing operations may be applicable to certain isolated cases, iridectomy is the operation which has given universal satisfaction and is pre-eminently the most reliable.

9. Iridectomy. This operation was first made by Von Graefe of Berlin, in the year 1856, and when properly made has secured better results than any yet devised as a curative agent for glaucoma. It is the operation which we rely upon. It has certainly been a great boon to humanity saving many thousands from everlasting blindness. It should be made during the prodromal stage in order to get the best results. The technique consists mainly in making the incision some distance back of the limbus well within the sclera. The keratome should be inserted just back of the limbus at the superior part of the anterior chamber just in front of the iris, taking care not to wound it, or the endothelial layer of the cornea. It should be urged well into the chamber and then withdrawn slowly so as to avoid a vacuum which might produce intra-ocular hemorrhage. If the knife is withdrawn quickly it may cause a sudden escape of the aqueous humor with probably a knuckle of the iris. The iris is now grasped with forceps near the pupillary border, withdrawn and cut with curved scissors at the ciliary attachment taking care to remove a portion of the iris at its root, so as to open the canal and re-establish drainage.* (Great care should be taken not to touch the capsule of the lens lest it produce cataract.) The size is not so important as it is to cut well back at the ciliary attachment. A flat curette should be passed into the chamber liberating any incarceration of the iris at the angles of the incision.

As a subsequent treatment, eserine may be instilled into the eye with beneficial effect. Sleep and rest should be enjoined. In sleep the pupils are contracted, when awake they are dilated; and as contraction of the pupils is desirable in glaucoma, sleep and rest should be encouraged.

DISCUSSION.

Dr. Barck thought, that Dr. Tiffany had not solved the question of whether the increase in tension or the occlusion of the iris angle came first, and he himself did not think it could be solved. At present none of the pictures shown gave evidence of inflammation of the choroid or ciliary body. He said that the connection between hyperopia and glaucoma was well known, but Dr. Tiffany had not shown what he promised;

that is: choroiditis causing glaucoma. The conditions which he had shown might just as well be explained as a result of the increase of tension.

Dr. Tiffany asked whether or not glaucoma had decreased.

Dr. Barck replied that it had not in his practice, but that his practice was only that of one man. At the meeting of the American Medical Association Dr. Hess stated that myotics cause a contraction of the ciliary muscle.

Dr. Tiffany stated that he did not claim that choroiditis was the sole cause of glaucoma, but that the constant exercise of the ciliary body in the hypermetropic eye caused hyperemia, congestion and finally uveitis which blockaded Schlemm's canal, obliterated Fontana's spaces and closed the iris angle, and, hence, a retention of the fluids which caused the intraocular tension with posterior staphyloma; all of which conditions were shown in the slides.

OSTEOMA OF THE CHOROID.*

By W. H. Schutz, M. D., Kansas City, Mo.

Pathological ossification of the choroid is not infrequently observed in phthisis bulbi, in which an early feature has been a cyclitis or a widespread chronic choroiditis.

It seems there is no definite period required for the growth of bone as it is found in the choroid in early childhood as well as in extreme old age. It is a well-known fact that calcareous deposits and bone tissue occur in all parts of the eye, with the one exception, viz., true bone has never been reported in the cornea.

In most cases the process of ossification develops in the posterior part of the choroid around or somewhere near the optic papilla. Again, independent foci may be observed in other parts of the choroid. These bone deposits assume various shapes and forms; they may appear as a band or ring surrounding the lens as small circumscribed plates, they may be so extensive as to form a continuous shell reaching from the optic nerve to the orra serrata, or form a mass that occupies the whole of the vitreous chamber.

It is conceded by modern pathologists that ossification of the choroid develops in the layer of fibrous tissue which has become organized from exudation thrown out towards the inner surface of the

*Read in the Eye, Ear, Nose and Throat Section, Fifty-second Annual Meeting Missouri State Medical Association, Jefferson City, May, 1909.

choroid. The fibrous tissue replaces the choriocapillaries, or where it is still present, the fibrous tissue is heaped up on its inner surface and destroys the lamina vitrea (Parsons). Regarding the conversion of connective tissue into bone, Stöhr remarks: "Single connective tissue fibres become calcified and on these are deposited osteoblasts, originating from embryonic cells, forming bone."

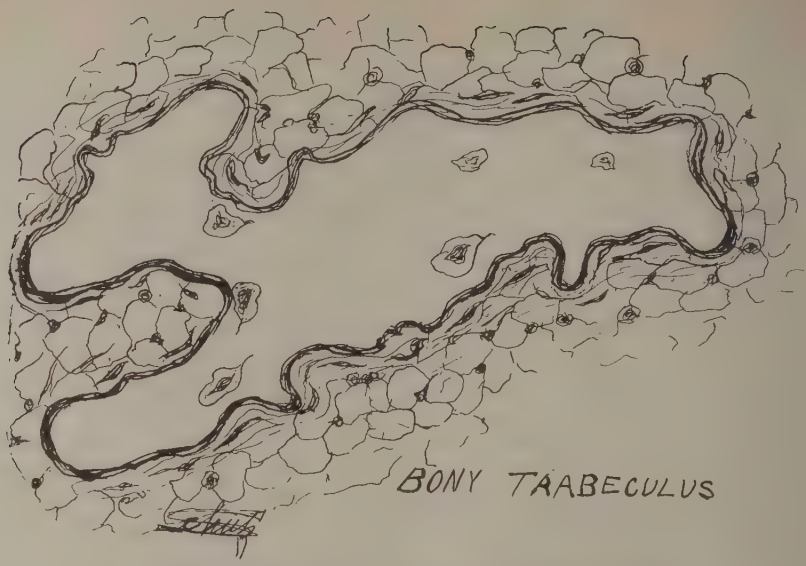
Grandclement suggests that "the embryonic cells that still remain in the choroid from fetal life are stimulated into growth by the long standing inflammation or irritation, and form fibrous tissue and bone."

Buchanan has expressed the opinion that the connective tissue corpuscles are converted into real bone corpuscles. Knapp claims that the origin of bone formation is in the choriocapillaries. He further states: "In the low stage of development the ossification begins in small plates which lie in the choriocapillaries and are covered by the hyaline membrane and the pigment epithelium. In a more advanced stage the more abundant exudation wrinkles and perforates the hyaline membrane, invests the inner surface of the choroid and is gradually converted into osteoid tissue."

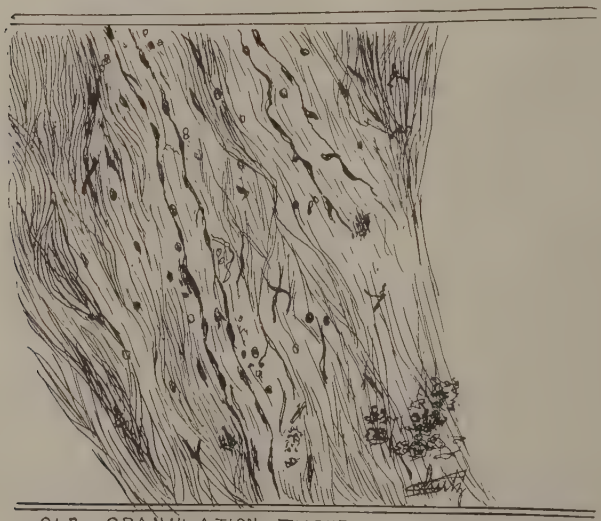
Parson says: "It is not yet clear whether connective tissue cells are ultimately derived from the fixed cells of the choroid or from the cells of the capillary walls. Any connective tissue, it is said, may be converted into bone, yet it is a difficult matter to say what are really the factors that determine the commencement of such a change in the fibrous tissue that forms in the choroid or other parts of the eye."

I believe, I am safe in stating that osteoma of the choroid filling the greater part of the vitreous chamber is comparatively rare, at least sufficiently so to warrant my presenting to this section two interesting cases, with specimens for consideration.

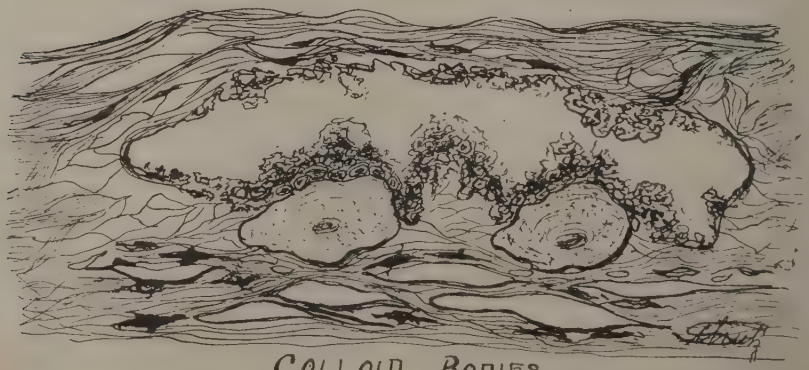
Case I. Mr. D. M., age 53, large and corpulent, by occupation a lumber merchant, consulted me on account of rapidly failing vision. O. D. phthisis bulbi; eye congested but not painful. O. S. V=20/100; not able to read; distance and near vision not improved by glasses. Ophthalmoscopic examination revealed advanced optic atrophy. O. S. Injured forty years ago in an explosion by a piece of glass penetrating the eyeball. Eyeball became violently inflamed with total loss of sight. After many months of suffering the inflammation finally subsided and gradually the eyeball grew smaller. Occasionally, in the past forty years, eye would fire up and then quite down again. There being no apparent cause for condition in left eye that I could ascertain other than the shrunken, irritable right eye, enucleation was advised, and the hope expressed that it might be the means of at least staying the progress of progressive loss of sight. The shrunken right eye was removed. One year lated V. in O. D. remained 20-100. (Figure 1.) Cornea opaque, very thick and full of calcareous deposits, pupil occluded; iris and lens calcified. The lens was seven mm. in its longest and three mm. in its shortest diameter. It was lodged unattached in the cupped cavity of the bony tumor which



BONY TRABECULUS



OLD GRANULATION TISSUE. SPECIMEN NO. 11



COLLOID BODIES

contained a liquid fluid. The bone mass is shell-like in formation, thick posteriorly (about 8 mm.) and thinner as it approached the ciliary body. The outer surface is rough and shaggy looking, having over all a brownish color; the inner surface is smooth and pearly white in color. The posterior pole is perforated.

Case II. Mr. R., aged 58, in good health, weight 300 lbs., very florid complexion; occupation traveling salesman; consulted me March 17, 1909, on account of severe pain in right eye.

When a boy eight years of age, a piece of metal entered the right eye following the bursting of a percussion cap on an old tube gun. For two years eye was under treatment by a well known Kentucky oculist. The inflammation and pain finally subsided. Vision lost. Eye has been painful and inflamed at intervals in the past fifty years. On examination I found O. D. shrunken, divergent, red and exceedingly painful to touch. Patient in great agony since 36 hours. O. S. absolutely normal. Advised enucleation. Right eye removed the following day. (Specimen No. II.) Cornea opaque with a few calcareous deposits. Pupil occluded; iris completely adherent posteriorly; no remains of lens in evidence; sclera slightly thickened. Entire vitreous chamber filled with ossified mass, containing a cavity lined with a smooth pearly membrane.

The posterior end, about 7 mm. in diameter, is pierced by a small canal through which the optic nerve passes. Within the cavity extending from the posterior pole to the ciliary body is a cone-shaped connective tissue membrane containing a metallic body firmly embedded in the base of the membranous immediately behind the iris, which appears to be a copper substance (probably a piece of the percussion cap); the bone tumor is irregular, rough and granular on its outer surface and closely adherent to the choroid.

I am indebted to Dr. E. D. Twyman, assistant pathologist of the City Hospital of Kansas City, Mo., for the following microscopical report:

The dense shell is composed of a reticulum of bony trabeculæ. These irregular masses and spicula form an almost complete shell on the outer side. Beneath this they join together in a reticular network with spaces between. This arrangement is four or five spaces deep. The innermost projections are irregular spicula of bone.

These trabeculæ are formed of the usual bony substance containing bone corpuscles enclosed in irregular lacunæ. Processes from the corpuscles project into fine canaliculæ. There are no true Haversian systems, however, as are found in dense bone. The spaces are filled with a fine reticular network and a moderately rich collection of round cells. Some fat cells are also seen in places. As no nucleated red cells are seen and as typical granulocytes or myelocytes are not made out by even an immersion lens, it is impossible to say if this is true marrow or substance or not. The granules may have been spoiled in decalcification, however.

A larger irregular space in the center is partially filled with an organized exudate, or old granulation tissue. There are the usual blood vessels in intimate connection with a network of connective tissue fibres and round cells, which form a dense mass, only relieved by a few spaces which still retain the purplish stain of the calcareous salts dissolved from them.

The choroidal pigment is found principally in a dense line along the outer shell, but bits of this pigment are found throughout the entire specimen, especially in the granular tissue.

Along the outer margin are found a number of "colloidal bodies" (Drusen). Only a thin membrane is external to these bodies. They appear as granular oval or roundish bodies like starch granules and a few of them show a darker, brownish, roundish center, like nuclei.

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DISCUSSION.

Dr. Klokke, St. Louis, said that the paper showed remote possibilities of an injury. The result of increased knowledge of this condition will be a more frequent removal of eyes suffering penetrating injuries. Their retention may cause the fellow eye to be affected by a progressive atrophy. This was different from a sympathetic irritation.

Dr. Carl Barck, St. Louis, said such cases were rather frequent. The fact of bone formation is very interesting, but it is not known what its causes are nor what cells give rise to it, and the theories of the different investigators vary widely. Only the terminal process is seen. The specimen shown exhibited a higher degree of ossification than is usually found. While there is not much danger of sympathetic ophthalmia, unless a foreign body is present, the eyes are usually removed because they become painful.

Dr. Schutz, in closing, said the main reason for reporting these cases was the unusual size of the tumors. Both cases were due to trauma. One eye was removed fifty years and the other forty years after injury. The optic atrophy of the other eye in the last case reported, has been checked since the removal of the diseased eye and vision remains at about 20/200.

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ECTOPIC-GESTATION SYMPTOMS IN GONORRHŒAL-SALPINGITIS CASES.*

By H. S. Crossen, M. D., of St. Louis.

I wish to direct attention to a certain class of gonorrhœal-salpingitis cases, which present a clinical picture very closely resembling that of early tubal pregnancy. These cases are not very frequent, but they are encountered occasionally in the examination of a large number of cases of supposed tubal pregnancy and when encountered they prove most deceptive and troublesome.

The deceptive combination of symptoms includes (1) missed or irregular menstruation, followed by (2) sudden onset of severe pain without apparent cause, (3) bloody vaginal discharge, (4) an increasing mass with (5) low temperature—the temperature being so low as to apparently exclude inflammation of sufficient severity to cause the symptoms. In each of the following cases, this combination of symptoms was sufficiently complete to cause a mistake in diagnosis.

Case 1. Patient, aged 32, referred to me in October by Dr. J. D. Beatty, of Troy, Mo. Gave the following history: Last normal menstruation August 10. In September went over time ten days. Felt as well as usual and supposed herself pregnant. No stomach disturbance nor breast pains. About September 20, had a scanty flow for two days. She felt well and there was no further bloody discharge for two weeks, when it started again. A day later she was seized with severe pains extending all through the lower abdomen. No shock, just pain—at times cramplike. This pain continued off and on for a week. Was confined to bed and had to be given morphia. A physician was called and made a diagnosis of abortion. No membranes passed and there was only one small clot. Was then curetted, but not much was obtained—apparently only some thickened endometrium. No fetus or membranes or shreds of tissue were seen at any time. Patient felt some better after the curetment, but still continued sick and confined to bed with abdominal pain and tenderness. Temperature 99° to 100°. Twelve days later, as there was no material improvement, the uterus was curetted again, but without result. The trouble continuing, Dr. Beatty was called in consultation. The abdominal tenderness and pains continued and the temperature then (after the second curetment) ranged from 99° to 101°.

Six days after the second curetment the patient was brought to St. Louis and placed under my care. Examination showed the uterus retrodisplaced and fixed and blended with a tender mass of adnexal origin

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extending into both sides of the pelvis. The average temperature was 100°, pulse 96, respiration 20. The lowest temperature was 99.2° and the highest 100.6°. There was evidently serious adnexal trouble of apparently recent origin, and the diagnosis lay between three conditions—(1) salpingitis following miscarriage, (2) an acute exacerbation of a chronic salpingitis, and (3) tubal pregnancy with repeated slight hemorrhages.

Against the first were the low temperature (much lower than consistent with an acute infection of sufficient severity to cause the symptoms) and the absence of evidences of miscarriage. Against the second, were the low temperature with acute symptoms, no history of preceding severe symptoms indicating old suppuration in the pelvis (though there had been mild pelvic distress for some years) and the association of the trouble with missed menstruation, followed by sudden onset of pain and the appearance of an irregular bloody vaginal discharge. If due to an old inflammatory trouble one would expect the menstrual flow to be increased instead of missed, and the pain and other symptoms to be of rather gradual onset, and increasing severity as fluctuation appeared in the mass. In favor of the third (tubal pregnancy) were missed menstruation followed by sudden onset of pain, irregualr bloody discharge, absence of evidences of a miscarriage and the presence of fluctuation in the mass associated with low temperature, much lower than was consistent with a pocket of pus. It seemed a fairly clear case of tubal pregnancy—one of the class frequently met with, where there is no great loss of blood at one time but repeated slight hemorrhages with a gradually increasing mass. Accordingly that diagnosis was made.

On opening the abdomen no tubal pregnancy was found. The trouble was chronic adnexal inflammation—there being a tubo-ovarian abscess on the left side (which gave the fluctuation) and chronic salpingitis on the right side, the remaining part of the mass being formed by adhesions and exudate. The damaged adnexa and the chronically inflamed appendix were removed and the uterus fastened forward. The patient made a prompt recovery with complete relief.

Careful bacteriologic investigation of the removed adnexa showed no bacteria of any kind. This excluded recent infection. The case was evidently one in which there was a gonorrhœal infection long ago (there were confirmatory facts in the history), the development of pyosalpinx with only slight symptoms of a mild character, the death of the bacteria (which commonly takes place in gonorrhœal pyosalpinx) and the persistence of sterile pus in a sac which acted as an irritating foreign body in the pelvis. No evidence of pregnancy was found. Why the menstruation was missed, I can not say. In some other cases of gonorrhœal salpingitis I have encountered this misleading symptom.

Case 2. Mrs. D., aged 21, admitted to the Gynecological Department of Washington University Hospital. Gave the following history. In November, missed menstruation. Had nausea and vomiting in the

mornings and in December noticed sensation of fullness in the breasts. There appeared an irregular bloody discharge twice in December, the last time on the 26th, from which date it continued until the patient entered the hospital on January 9th. She came for treatment on account of rather severe pain which had appeared the last few days in the right ovarian region. This was so severe that she had had to stay in bed on the previous day. The patient had been married five years, and her history indicated that immediately following marriage there was an attack of gonorrhœa resulting in pelvic inflammation. This troubled her more or less for a year, when she recovered completely and for four years had had no pelvic trouble of any kind, except some leucorrhœa.

On admission her temperature was 100.6°, pulse 90, respiration 24. Examination revealed a tender mass to the right of the uterus, evidently adnexal. The temperature late that day was 101°, and the next day was 99° in the morning and 101° in the evening. After that the temperature remained low, ranging from 98° to 99°, only once reaching 100°. The patient was kept under observation and palliative treatment for twelve days. There were irregular attacks of pain in the pelvis and the mass gradually enlarged. The missed menstruation, followed by irregular, bloody discharge, onset of severe pains, development of a mass in the tubal region, and persistent enlargement of the mass with continued low temperature, seemed to justify a diagnosis of tubal pregnancy, which diagnosis was made.

When I opened the abdomen no pregnancy was found, but instead a right pyosalpinx (chronic), which undoubtedly dated from the previous gonorrhœal inflammation, though it had given practically no symptoms during the period of four years. The pus sac was removed and the patient recovered.

Case 3. Patient aged 19, referred to me by Dr. Geo. F. Chopin, of St. Louis. Gave the following history. About two weeks after marriage she failed to come unwell properly. At the menstrual time there was a slight bloody discharge, but not a good menstrual flow. There was some soreness and pain in the pelvis. After this had continued a few days, she was seized with sudden severe pain in the lower abdomen, accompanied by shock. With the weakness and faintness and pain she could hardly move, even to turn over in bed, for several hours. The severe pain gradually subsided but marked soreness remained, so much so that the patient was obliged to lie very quiet. A physician, who was called, examined the patient and said that she was having a miscarriage. A partial curetment was carried out but only a small amount of blood was removed, and no fetus, membranes or large clot was passed at any time. The patient and her husband then became uneasy at the apparent seriousness of the trouble and the day after the curetment called Dr. Chopin, who asked me to see the patient.

The patient was confined to bed with pain in the lower abdomen and a bloody vaginal discharge. There was marked tenderness on abdominal

and bimanual examination, and there was a boggy induration on each side of the uterus, and marked tenderness. No membranes nor shreds were found in the cervix nor in the bloody discharge. The discharge was blood and mucous, without noticeable pus admixture. The trouble seemed to be around the uterus rather than in it. The temperature was low, fluctuating between 100° and 101°. Here was a patient, apparently previously healthy, seized with severe abdominal pain and decided shock, associated with imperfect menstruation, an irregular bloody discharge, a tender mass partially surrounding the uterus and low temperature. I made a tentative diagnosis of tubal pregnancy with some internal hemorrhage, but not being entirely satisfied, I concluded to watch the case for a while. Under mild sedatives, and strict confinement to bed, the patient became very comfortable. The temperature ran about 100°. After a few days she felt so much better that, without my permission, she began to go to the washstand. On one of these trips across the room, she was seized with pain and almost fainted before she could reach the bed. There was then more pain and pelvic soreness and an increase in the tender mass about the uterus. I then insisted on the patient's removal to the hospital, where she was kept under observation for five days longer. On admission the temperature was 101.2°, pulse 100°, respiration 24. There was considerable abdominal pain, requiring a sedative occasionally. The next day the temperature was 99° and for four days did not go above 99.6°. In the meantime the patient felt comfortable, could sleep well, her appetite returned, and the pelvic soreness diminished. The bloody discharge continued. The fifth day, without apparent cause, the abdominal pain returned and became very severe. The pulse rose to 132°, temperature 100.6°, respiration 24°. On examination the tender pelvic mass was found to be larger. The tentative diagnosis of tubal pregnancy seemed confirmed by the spontaneous recurrence of severe pain, the rapid pulse, and the continued enlargement of the pelvic mass, with low temperature.

When I opened the abdomen, I found there was no extrauterine pregnancy, but instead an acute double salpingitis, with leakage of pus into the peritoneal cavity and the formation of extensive adhesions. The tubes were so badly damaged that I thought best to excise them. After establishing free drainage of the infected area, I explored the interior of the uterus thinking that possibly there had been a miscarriage after all, with infection following it. But no evidence of pregnancy was found. The patient recovered without particular incident.

Examination of the pus from the tubes showed gonococci in abundance and in pure cultures. The case was one of gonorrhœal infection following marriage, the infection affecting the vagina but slightly and passing rapidly up into the uterus and tubes and out into the peritoneal cavity. A striking fact, and perhaps the most misleading one in this particular case, was the absence of the usual evidences of acute gonorrhœal vaginitis (burning on urination, vaginal tenderness,

and free purulent discharge). These were so slightly marked that there was no suggestion of the trouble being acute gonorrhœa. Had I examined the bloody discharge microscopically, gonorrhœa would at once have been evident. Had the discharge been frankly purulent this examination would of course have been made, but being bloody, its purulent character was obscured.

Case 4. Mrs. B., aged 27, admitted to the Gynecological Department of Washington University Hospital. The previous history is somewhat uncertain, but the more prominent facts were that she had been sick for two or three weeks with some abdominal trouble characterized by a sudden onset of severe pain, a continuous bloody vaginal discharge, an increasing mass in the lower abdomen, and not much fever.

When admitted the patient was very sick, with a large tender mass in the right side of the pelvis and lower abdomen, and much peritoneal irritation. Temperature 97.6°, pulse 116, respiration 24. During the afternoon the temperature went to 102° and the pulse to 124. The next day the temperature varied from 99.2° to 100.4°. After that it ranged from 98.6 to 100, only twice getting as high as 100.6 and never above that. The patient was kept under observation for seven days. The process continued active and progressive. The abdominal pain was very troublesome and required sedatives. The mass gradually enlarged until it extended almost as high as the umbilicus. The low temperature seemed to exclude inflammatory trouble of sufficient severity to cause such a mass, and particularly such rapid enlargement of the mass. The case was closely observed and carefully studied. No hypothesis explained the conditions present so well as ruptured tubal pregnancy, with repeated hemorrhage and resulting irritation and exudate. Accordingly that diagnosis was made.

The operation revealed a large abscess occupying the pelvis and extending almost to the umbilicus. There were no blood clots or other evidences of tubal pregnancy. Everything was so matted together that no attempt was made to separate the various structures. The pus was evacuated and the cavity drained. The patient made an excellent recovery. The exact cause of the abscess was not certain, but it was supposed to be of tubal origin and probably arose from a gonorrhœal pyosalpinx.

It may be thought that the temperature of 102 for a day was enough to exclude tubal pregnancy as the causative factor, but such is not true, for in many cases of extrauterine pregnancy with hemorrhage, the temperature will run up temporarily to 102 and higher. The following is a case in point. Mrs. P., aged 31, admitted to the Gynecological Department of Washington University Hospital. On admission her temperature was 101.4 and pulse 140. She gave a clear and typical history, and the diagnosis of ruptured tubal pregnancy was positive. However, the hemorrhage had been so severe, that she was in very poor condition for operation. The hæmoglobin had been reduced to 30%, which made opera-

tion or even anesthesia alone very dangerous. As the hemorrhage had stopped and she was improving, it was decided to defer operation until it could be carried out with less danger. The waiting period was seven days. During that time the temperature went up to 102 nearly every day and one day reached 103.4. After seven days the blood condition had improved (hæmoglobin above 40%) and she was so much improved otherwise that operation was carried out. There was no pus in the peritoneal cavity—simply the unabsorbed blood. The patient recovered promptly.

Time will not permit my going beyond these personal experiences in detailing cases of this character. However, a number of such cases have been reported in the literature of the last few years—sufficient to show that they constitute a distinct and important class, intimately connected with the differential diagnosis of tubal pregnancy. I trust that this presentation and discussion will aid in calling attention to these cases, that they may be watched for and studied closely and the difficulties overcome.

From the cases I have studied thus far, the following practical deductions may be drawn:

1. Gonorrhœal pyosalpinx, after the acute symptoms subside, may lie dormant and unsuspected for a long period, even as long as four years. During this quiescent period there may be no indication of its presence and the patient may feel practically well. In these cases the pus-tube (containing sterile pus usually) seems to be tolerated the same as a small tumor or other non-irritating foreign body in the pelvis.

2. Such a quiescent pus-tube may, at any time, give rise to an acute attack of pain and disability. The onset of the pain may be so sudden and apparently causeless as to suggest tubal pregnancy. And the suggestion is strengthened by the continued progress of the trouble (enlargement of mass from irritative exudate, with resulting pain) without decided fever (for the pus is sterile).

3. Accompanying the exacerbation or preceding it, there are sometimes other symptoms which we associate with tubal pregnancy, viz., missed menstruation, stomach disturbance, tenderness of the breasts, and softening of the cervix uteri. The last three are accounted for by the peritoneal and peri-uterine irritation and congestion, but why there should be delayed or missed menstruation at this inopportune time, I do not know. One would suppose that the irritation and pelvic congestion would cause the menstral flow to be excessive rather than absent. It is possible that the temporary suppression of menstruation (from some nervous disturbance or other obscure cause) stands in a causative relation to the acute exacerbation with its subsequent symptoms. I offer this simply as a suggestion toward a possible explanation of this strange and misleading sequence of events (the missed menstruation followed by the other symptoms detailed).

4. In cases of supposed tubal pregnancy of the type mentioned,

particular care should be taken to exclude chronic gonorrhœal salpingitis, as follows: a. By inquiring into the patient's *history* for evidences of specific vaginitis or urethritis, and for subsequent pelvic symptoms. An inquiry into the husband's history, also, may bring out valuable information. b. By a careful *examination* for evidences of a chronic urethritis, bartholinitis, endometritis or salpingitis. c. By *staining for the gonococcus* any suspicious discharge that may be obtained from the urethra, vulvo-vaginal glands, uterus or vagina. In chronic cases, negative findings do not exclude gonorrhœa, for the gonococcus disappears from the discharge after a time.

5. In rare cases, *acute* gonorrhœa may extend rapidly through the uterus to the tubes and peritoneum, with so little disturbance of the vagina and vulva as to arouse no suspicion of its presence. In such a case, the acute perintoneal symptoms will come on suddenly and without apparent cause. If there happens to be also delayed or scanty menstruation, tubal pregnancy may be suspected. And this suspicion is strengthened by the stomach disturbance, the softening of the cervix, and the enlarging mass beside the uterus. In the case above mentioned, the diagnosis was further obscured by the curetment (which modified the discharge) and by the continued low temperature, which seemed to exclude acute inflammation. In all such doubtful cases with acute discharge, it is advisable to examine for gonococci, even though the discharge be scanty and bloody and apparently non-purulent.

310 Metropolitan Building.

DISCUSSION.

Dr. Hyde, Kansas City: My observation that these cases occur more frequently than some of us believe is brought home to me because of a case I operated on a week ago. The symptoms of ectopic gestation complicating salpingitis, outlined by the doctor, were observed in my case. We were not certain as to the diagnosis. A curettement was done and no blood clots were removed. An abdominal section was done. On going through the peritoneum I found that I had entered the urinary bladder, having made an incision about an inch long. This was closed and another incision made in the peritoneum, and I found a large salpingitis on both sides, with much pus. The tubes were removed and the patient put to bed in the Fowler position. The patient got along nicely and was soon out of danger.

Dr. J. D. Griffith, Kansas City: It seems to me that this excellent paper appeals to every one of us who does belly work. We all find ourselves, not infrequently, confronted with the problem of what we may find on the other side of the uterus. The essayist has certainly called our attention to the condition of the uterus itself in acute gonorrheal trouble, and has demonstrated to us the fact that although the patient may have missed a period by ten days or two weeks, or longer, or that there is a bloody discharge and a softening of the womb, not infrequently

it seems just as though it were a commencing gestation. Here is the point that he has called to mind, that we cannot be too careful in examining the secretion and even the blood coming from that woman. It is the experience of most of us, perhaps, that we have at times made a diagnosis of extrauterine pregnancy, but when we cut down into the abdomen we find a pus tube. Now, I experienced the reverse of that a few weeks ago, with a history such as the doctor has described, of a lady who was a widow, young, pretty, etc., and she had never dreamed of any trouble of this kind, of course. There was a little bloody discharge for five or six days, painful side, with the belly distended somewhat, and she had a sudden onset of trouble. Her kidney on one side had been painful, and the doctor who brought her to me said there was a stone passing down the ureter which he wanted to get out. I asked the doctor if she was married. He answered that she had been married but was not now. I said, "We may have something else here." He said, "No." When we put here on the table there was no stone in the ureter, and the kidney was normal, but there was a mass in the tube.

Dr. A. R. Kieffer, St. Louis: I had a case of a married woman seized by a sudden onset of excruciating pain on the 22nd day of February. The pain was localized in one side. She sent for a doctor who discovered a lump, as he described it, in the pelvis. A diagnosis of fibroid was made.

Now, in every case of ectopic pregnancy that ever came under my observation, I find that the woman at some time had suspected that she was pregnant, where I have been able to investigate thoroughly. In the case I am describing, I could not get that symptom. She did not have any tenderness of the uterus, and she had never missed menstruation. Just prior to the 21st of February she was a little late.

We opened the abdomen and found a mass of pus which must have been there a year or more. There is a peculiar apprehension combined with cases of ectopic pregnancy that points strongly to its presence. In addition to that, if they go far enough, the menstruation is always atypical in every respect.

Dr. C. Lester Hall, Kansas City: These cases were interesting to me for the reason that I have had some similar experiences, and I want to say that I have not seen a case of extrauterine pregnancy where the disease existed at the time of the pregnancy, nor do I believe pregnancy possible if the disease exists at the time. There must be a healthy tube or pregnancy will not take place.

DYSMENORRHŒA.*

By John McH. Dean, M. D., St. Louis, Mo.

In the general acceptation of the term dysmenorrhœa we mean to designate painful menstruation; but I believe the word menorrhalgia could best be substituted. Dysmenorrhœa is therefore merely a symptom and not strictly speaking, a disease in itself. The subject of this paper is a very wide one, and must of necessity carry us in various directions; and the brief time allotted to each paper would not permit of my going as fully into the subject as the subject itself might demand. I shall therefore confine my remarks to the sources and treatment of the different varieties.

Painful menstruation occurs in different percentages according to the surroundings, occupations and climatic conditions. We can rightfully state that it occurs in at least 5 per cent. to 15 per cent. of menstruations, and from this we must exclude, naturally, the trifling indispositions which occur in nearly all menstruations and include only those which give rise to severe pain, very often requiring the sufferer to go to bed.

Women accustomed to out-door exercise, or those engaged in work that requires much physical labor, suffer less than those whose lives are spent in sedentery pursuits, or who are compelled to work indoors. Painful menstruation is frequently present in women who have, or will have, very painful parturition. Savages suffer less than the cultured, and we can correctly infer that good muscular development is a factor in normal menstruation. The use of corsets and taut lacing is a fruitful cause of painful menstruation owing to the fact that maybe the genitalia are displaced or congested. Women living in high altitudes generally suffer more than those in low altitudes.

As to the varieties of dysmenorrhœa I may mention the following:

1. The neurotic type, or that in which the nervous system is the main factor.
2. That due to congenital defects in the genital organs.
3. That due to acquired or pathological defects in the genital organs.

Of the first type I may say that at least one-third of all menstrual pain can be placed in the neurotic class. Hysterical and neurasthenic patients suffer very frequently at the menstrual period. When we consider the nerve supply of the female genitalia the second, third and fourth sacral nerves ramifying with the sympathetic, aortic and renal plexuses, we cannot help concluding that a nerve storm in any remote part of the

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anatomy is likely to show itself in the female genitalia at the menstrual period. Hot flashes, apical, intercostal, mammary, inguinal neuralgias are common concomitants to menstruation. Constipation existing at the time of menstruation may irritate reflexly this rich nerve supply to the genitalia, and produce pain. The most common manifestation of this variety is the spasmodic or cramp-like pains in the inguinal, lower intercostal, lumbar and hypogastric regions. Macular and papular eruptions on the face, and as I have recently seen, herpes occurring at the menses, are neurotic manifestations. I have seen a patient whose nose would tingle and become scarlet red during menstruation. Fainting spells and throbbing headaches belong also to this class. Meteoristic distention caused by an intestinal paresis secondary to the increased blood supply is a common symptom of the neurotic. On the whole those cases of painful menstruation not accompanied by any observable change in the genitalia correctly belong to the neuroses. As to the second variety we include those congenital defects as absence or faulty development of the genitalia; rudimentary uterus or ovaries. Atresia of the uterine canal is a frequent cause of dysmenorrhœa. Some malpositions and flexions of the uterus belong in this class.

As antiflexion is congenital and seldom acquired, we do not find dysmenorrhœa unless the flexion causes obstruction to the exit of the menstrual flow. Whether the pain is due to actual obstruction or the result of hyperesthesia and muscular spasm is a disputed point. Observers have noted that during menstruation the cervical canal is more patent than at any other time, and some have examined patients with marked antiflexion whose canal between the periods would not permit the insertion of a small probe, during the period their canals were found open and the probe could be introduced with ease. Still, dilatation of the uterine canal prior to menstruation remedies a certain percentage of these cases of dysmenorrhœa.

Congenital absence of the ovaries naturally produces an amenorrhœa. I have, in the last year, examined two patients; the one had an absence of the uterus and ovaries (as far as I could make out) and in the other the ovaries were absent. These patients manifested nervous symptoms, and one had regular monthly pain without flow.

As to the third variety we include pathological conditions of the genitalia. Almost all pathological changes may produce dysmenorrhœa, and yet we are often startled to find very serious changes that are absolutely unaccompanied by painful menses. Why this should be so is a question I am not able to explain. We know from observation that sometimes very extensive pleurises do not produce the excessive pain that even slight forms often do and so we must conclude that the severity of menstrual pain is not always in proportion to the pathological condition existing.

Lacerated perineum allowing some procedentia and lacerated cervices produce pain. This pain is more of the spasmodic or sharp lan-

cinating character. Endocervicitis, endometritis and salpingitis are also causes. Whether the ovaries can be blamed is a disputed point. True it is, that enormous ovarian cystic tumors exist without pain. I have repeatedly seen large cystic ovaries in women who never suffered at the menstrual time. The localized pain so often complained of in the ovarian region is in the majority of cases not due to ovarian disease, but is a referred or neuralgic pain. This point I have, in the last year, had a good opportunity to investigate. Two patients came to me with severe pain during menstruation localized to the ovarian regions. I observed them closely for some time. Finally the pains became so acute and the patients complained so bitterly, that I explored the ovaries and genitalia. In the first I found a small cystic ovary which I excised, leaving the ovary intact. She also had a slight retroversion which I adjusted. Much to my dissatisfaction the patient suffered the same pain, which was just as intense, after the operation as before. Finally I persuaded her that she was perfectly normal, and after several months she learned to forget her pain.

The other was operated six months later. Finding the same condition, and remembering my experience with the former case I decided to remove the cystic ovary, which was about the size of a small lemon. No other abnormal condition could be found to account for the intense pain that was troubling her. This patient also returned at the next menses suffering the same intense pain. This pain continued for three months, when she became pregnant. She aborted in the third month and subsequently her ovarian pain returned.

The above two cases undoubtedly will voice the experiences of others who allow neurotic dysmenorrhœa to be attributed to cystic ovaries. Other observations have led me to believe that true uncomplicated ovarian dysmenorrhœa is a very rare disease. Hydrosalpinx, hematsalpinx, and pyosalpinx are frequent sources of pain at the menstrual period. The pain is somewhat of a cramping nature, sometimes described as a throbbing localized one in the inguinal, lower intercostal, and running towards the back. In pyosalpingitis we have as an accompaniment, fever, headache, vomiting at times. In ovarian hematoceles we may have the throbbing pains. The pains are often in a peculiar way localized to the lower intercostal regions at menstruation. An endometritis is often responsible for the pain, especially that rare form, membranous endometritis. Casts of the endometrium are thrown off with labor-like pains.

Retroversion caused either by a faulty management of the puerperium, *i. e.*, resulting subinvolution of the uterus, or by strain, or by a tumor of the fundus, causes that boring like pain in the sacral region during menses. Gastric symptoms often simulating ulcer very frequently are manifested in this class.

At present I have a patient suffering from dysmenorrhœa, the

result of a retroversion produced by a fibroid in the fundus who manifests these symptoms.

Submucous fibroids cause painful menstruation more often than the intramural or the subserous. The reason for this is that mechanical obstruction is greater than in the other forms.

Sarcomas and carcinomas are rare causes. Pelvic hematoceles and abscesses do not cause so much pain as one would imagine. The laity's idea of "catching cold," either due to exposure or cold bathing during the menses, causes a sensation of pain from secondary congestion due to the spasmodic closure of the os or to the coagulation of the flow.

As to the treatment of the first variety, *i. e.*, the neurotic, I would first suggest a change, either in their social condition, for many dysmenorrhœas disappear after matrimony, or in their occupation. Advise plenty of fresh air, open air exercise, tennis, golf, surf bathing. Cold bath in the morning may tone the nervous system. If they are confined to work indoors in a standing position, advise a change of occupation, or if their condition is very severe have them give up work and if need be place them on an absolute bed rest cure. If anemic, and then we may notice a scanty flow, prescribe iron either alone or in combination with aloes. In cases of constipation it is well to treat same in the intervals by diet, regular habits, water, or medication. It is surprising how much benefit a saline cathartic taken at the beginning will have in allaying these pains. Helonium, viburnum, gum guaiac in 10 grain doses, three times a day and antispasmodics are very beneficial in these pains. Bromides, aspirin, codein, or even opiates may be indicated in some cases. The hot sitz bath and hot stimulating drinks, brandy, gin, hot applications to the lower abdomen are good means to adopt in the beginning. It is surprising how a little gin, in severe cases, alleviates the pain in the beginning. In some parts of Europe this is used often. Psychic therapy finds here a fruitful soil for its use.

Above all we must be certain, after a careful examination, that our patient is not suffering with an organic dysmenorrhœa. It has been my custom to observe a case thoroughly for several months and if relief does not come from following out the various methods above mentioned, to place the patient under a general anesthetic in a hospital and make a thorough examination. I believe in this way we do away with the temerity and modesty that would otherwise mar the accuracy of our examination, and furthermore we can pursue the given examination with more justice to ourselves. It is also very important that we do not lose sight of the fact that our patient, while she may be suffering from some slight abnormal condition in her pelvis, that her dysmenorrhea may be purely of a neurotic variety. I am strongly of the opinion that often when slight abnormalities are left alone patients do better than when we call their attention to same. In making the patient cognizant, or aware of her condition we may seriously affect her nervous system. Unless marked symptoms demand interference, I am of the opinion that we

should leave well enough alone. Pelvic abnormalities sometimes are allied to or resemble movable kidneys. We know how often movable kidneys are symptomless subjectively until recognized by physicians.

With regard to the congenital defects, I may first consider antiflexion with strictured or narrowing of the canal. Not all antiflexions cause obstruction and consequently not all require dilatation of the canal. Like retroversion, antiflexion exists without symptoms and therefore no surgical operation is indicated. Where there is a certain obstruction I believe in dilating and either packing the canal with gauze, allowing it to remain in place for two or three days, or by inserting Wylie stem pessary under strict aseptic precautions. The use of this pessary has been followed by very gratifying results in my practice. The patient is allowed to wear it for several months without withdrawing it. Menstruation takes place through the groove in its shaft. While there are many who cannot wear same without considerable pain, some have been known to wear them for six months or longer. In our desire to keep the canal patent we must not lose sight of the fact that this stem pessary will in many cases cause irritation and subsequent endometritis or pelvic infection. I have used the pessary in six cases. Two of these wore it for three months and the result was ideal. I prescribed antiseptic douches daily. In two the pessary was worn for a week and at the end of that time I could see that some irritation was beginning and I removed it. The others could only wear them for 24 hours owing to the pain. However, all were benefited. In very severe cases double, complete splitting of the cervix has given good results. The operation advised by Dudley, while it may have its application in some cases, must necessarily be serious should pregnancy take place.

In one case of antiflexion my patient's monthly flow consisted of a dark green fluid, evidently the result of retention.

With reference to the surgical treatment of retroversion we have in the Gilliam operation an efficient means of remedy. The round ligaments should be shortened through the inguinal canal and the practice of making a new opening through the peritoneum must be condemned as unnecessary and dangerous. Ventral fixation on account of the many troublesome symptoms following same is not a good procedure. The various intra-abdominal shortenings of these ligaments fail unless the ligament is fortified by a linen stitch at the internal abdoninal ring.

In the treatment of salpingitis (simple) the use of hot sitz baths daily and the use of ichthyol tampons, often afford relief. The symptoms produced by this condition, such as slight fever, headache, generally apical, vomiting, distention of the abdomen with marked tenderness, may become so troublesome as to warrant the removal of the Fallopian tubes. Should the ovaries be found in good condition they may be allowed to remain to offset the nervous symptoms that so often follow their removal, and allow menstruation to continue.

In several of my salpingectomies I have retained the ovaries, but in

some I noticed that the subsequent menstrual flow was so profuse that I later wished I had removed them. In one of my patients I was compelled later on to remove the one ovary I left in place, to do away with the severe hemorrhage that accompanied each menstruation. I am strongly of the opinion that where the condition demands the removal of the tubes, in our endeavor to be conservative, we often make mistakes in allowing the ovaries to remain.

Pyosalpingitis demands the removal of the tubes and, for the above reason, the ovaries.

Fibroids and other tumors of the uterus require the removal of the tumors and if need be the uterus itself. Here again, I believe, the preservation of the tubes and ovaries is not always the best surgery. Frequently in hysterectomies for fibroids I have preserved the ovaries only to have them become painful, either due to adhesions forming around them or to the periodic congestions. Again we are not always certain that our apparent simple tumors may not be malignant and should we, after our pathological examination in the laboratory, find malignancy, we will then have reason to regret our conservatism.

Malignant tumors of uterus demand the Wertheim operation when expedient. The promiscuous removal of normal adnexa to relieve neurotic dysmenorrhœa must be condemned. As we are all aware that seldom do we find an ovary without small cysts, these cysts do not constitute sufficient ground for their removal. In dysmenorrhœa the result of the passage of blood clots or casts we must bend our efforts to the causation which is found often in the endometrium. Curettage and cauterization of the endometrium affords relief in this class.

In concluding this brief paper I wish to emphasize the following points:

Ovarian dysmenorrhœa is a rare disease and the localized pains in the ovarian regions during menstruation are most frequently referred from some other remote cause.

Uterine displacements do not *ipso facto* call for operative procedures. Very frequently serious disease exists in the genital organs without producing painful menstruation.

A great majority of cases of dysmenorrhœa are neurotic. While this may be the case we must only conclude a case to be neurotic after a thorough examination has been made under an anesthetic. That in removal of pus tubes or the uterus for tumors it is well to remove the ovaries at the same time. Especially should this be done if our patients are past forty years. This step should be taken in tumors lest we have malignancy and in pysolpingitis lest we have menorrhagia subsequently. That the Wylie stem pessary is very beneficial if used carefully in selected cases.

DISCUSSION.

Dr. A. H. Bradley, St. Louis: I do not want to suggest this as a general treatment, but I want to ask Dr. Dean if he has ever tried the

use of cocaine in the nose for these neurotic forms of dysmenorrhea. Like Dr. Crossen, in regard to the treatment, I believe that usually curettement is most effective. If there is not an obstruction or some anatomical difficulty, if it is a neurotic case, and cocaine applied in nose, there is a tendency to take away the effect on the mind, and they are inclined to forget it. I have seen several cases very beneficially treated by application of 20 per cent. cocaine solution to the turbinate. Of course, if you allowed the patient to know what the treatment is, there would be some danger of her forming the habit.

Dr. Bridges: I understood the doctor to say that he had one case with pain where there was congenital absence of the ovaries. I would like for him to state whether that is correct. I probably misunderstood him, as it seems a little peculiar to me.

Dr. Dean, replying to Dr. Bridges, said that a neurotic patient on whom he operated for gastric adhesions, showed the absence of both ovaries. The patient gave a history of abdominal pain that came on periodically but was not followed or accompanied by any menstrual flow.

THE OPEN METHOD OF TREATING INFECTED JOINTS; WITH REPORT OF A CASE.*

By John D. Seba, M. D., Bland, Mo.

It is not the intention of the author to elaborate the etiology and pathology of septic arthritis. This condition might be brought about from different sources of infection and by different infectious agencies. The ones that most generally call for surgical intervention are infections of staphylococcus or streptococcus. The infection may reach the joint through a wound, by way of the blood vessels, or through the lymph channels.

The condition then, of septic arthritis, is the condition that most often calls for arthrotomy. When first seen by the surgeon most of the cases are in the acute stage. The patient is suffering from pain in the affected joint, due to tension from the effusion in the joint of septic material. If absorption from the joint into the general circulation has taken place, the patient has had a chill followed by an elevation of temperature. When such a condition presents itself, there is no use in temporizing, or in further jeopardizing the comfort, or even the life of the patient, by waiting. An arthrotomy should be done. The pent-up septic

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material should be given a chance to escape. Drainage should be provided for the escape of other infectious material that may accumulate.

The opening of a joint is generally best accomplished under a general anesthesia. A careful examination of the affected joint while the patient is under the anesthetic, will reveal to the surgeon the best point for making the incision. In some instances it is better to make two incisions rather than one incision only. The most dependent point will suggest itself to the surgeon. The end to be obtained is to have as good drainage as possible. Most of the text books recommend rubber tubing; personally, however, I prefer sterile gauze to rubber tubing. Irrigating the joint cavity with a saline solution is beneficial. Some text books recommend antiseptics in the joints, especially peroxide of hydrogen. Personally I do not believe that they are of any benefit, and very often they are harmful. The use of peroxide of hydrogen very often causes a distention of the joint and subsequent pain; the resulting foam, or effervescence of the fluid, if left in the joint cavity, is about as deleterious as the infectious material itself. The text books also recommend that the joint be put in an immobilizing splint, thus putting the joint at enforced rest. I question the wisdom of this procedure. Immobilization of a joint is not a physiological rest. The physiology of a joint is motion. As soon as joints are formed in the fetus they are supplied with stimuli that cause motion. Hence motion is a physiological action; when it is interrupted by a pathological condition the physiological function should be restored as soon as possible. Viewed from this standpoint I can not see any necessity for immobilization of an infected joint that has been opened and drained. Early passive motion will have several advantages over an immobilized joint. The motion will have a tendency to drain the joint more perfectly. The motion will also prevent early adhesion. If a joint comes under the observation of a surgeon before there are adhesions, and he operates on it in time, adhesions should not form after he is put in charge of the case. He can open the joint and drain it. He can prevent adhesions of the synovial membranes by motion of the joint. Too many surgeons still pin their faith to antiseptics in these cases, which are very often applied liberally with the hope that they will penetrate the tissue, hunt out the germs and kill them; their hopes are altogether too sanguine. Many of them never stop to think that a dead germ, if left in the tissue, is as much of a detriment as the living. Then, too, antiseptics strong enough to kill the germ are also strong enough to kill the protoplasm that repairs the injured tissue. By this statement I do not want to be understood to mean that we should not use aseptic precaution in preparing for and executing the operation of arthrotomy; on the contrary there should be as much precaution in an arthrotomy as in a laparotomy. Asepsis is much to be preferred in either procedure to antisepsis. The after-treatment in arthrotomies should be: first, to keep the joint in as comfortable a position as possible. Replace the gauze drainage at least once every twenty-

four hours. After having removed the drainage and before putting in another, give motion to the joint in all physiological directions of the joint; then replace the drainage. Before putting on the dressing give gentle massage to the injured member, first give the muscles above the joint a brisk rubbing, then the muscles below the joint, and complete the massage by manipulating the joint itself. This is probably best done by first using the tips of the fingers, gently following the outlines of the joint and finishing up with the flat hand. The massage is for the purpose of aiding circulation in the affected parts. To repair an injury, it must receive pure fresh blood. If we only stop to think for a moment; blood is the only medium by which the process of repair is accomplished. Then why do we want to impair this circulation by immobilizing splints and bandages? They are certainly contraindicated. Well applied massage will aid the circulation in the affected parts and will put more life blood in the tissue surrounding the injury than any other method I am acquainted with. It will produce a hyperemia and in that way will aid nature in repairing the injury.

In trying to overcome a pathological condition we should ever be vigilent to try and imitate nature's methods in repairing damages done to the tissue. Whereever or whenever we find an inflammatory process, we will find upon close investigation that it is really a conservative effort at repair, not a process of destruction; therefore we should be ever willing to follow along the way pointed out by nature.

The author is glad to note an advancement along this line. In the good old days now passed, it was the practice of surgeons to put a fracture in a fixed splint and then not look after it for two or three weeks; often to find that the bones were not in good apposition. The more conservative surgeon will not now trust to Providence and good luck in such cases; but take off the bandage much sooner and thus know how the fracture is getting along. Such a procedure will greatly add to the comfort of both patient and the surgeon; both will sleep better at nights than if the old method be followed.

The same method of putting on an immobilizing splint and not looking after it was also in vogue several years ago in the treatment of sprains. This method I am happy to say is also falling into disuse. A sprain kept at rest for a few hours with a snugly fitting bandage, then removed and gently massaged, first with the tips of the fingers, then with the palm of the hand, will do better than if put in an immobilizing splint and kept there for days.

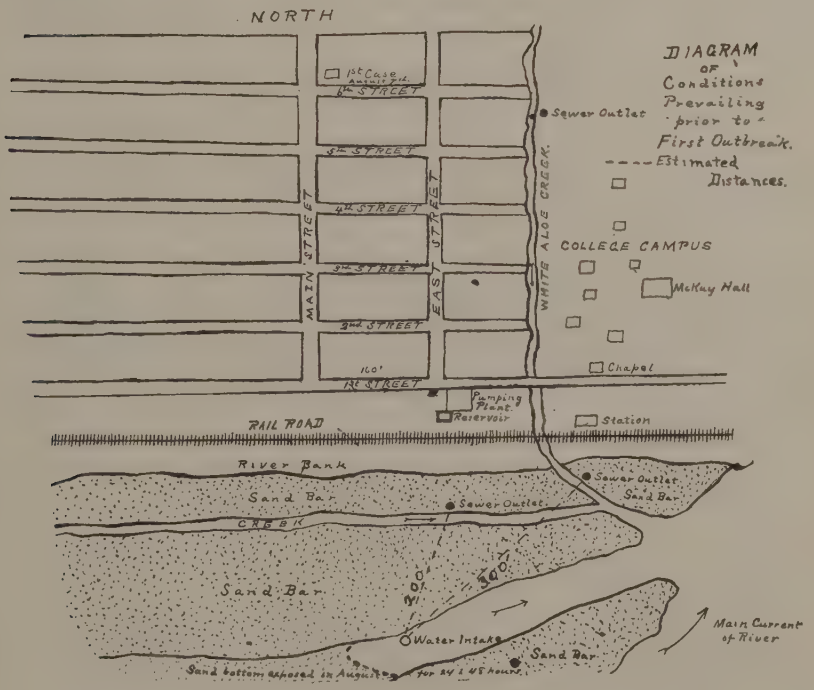
I shall only mention one case: Mr. T. S., aged 21 years. A year ago last October while harvesting corn, cut his right leg with a corn knife. The cut was five inches in length, on the inner side of the lower third. The wound went through the tissue and also injured the periosteum. A surgeon was called who repaired the wound three hours after the injury, by putting in thirteen stitches. The wound must have been infected at the time of the injury. Sepsis soon developed, inflam-

ing the leg from the foot up to the knee. The attending surgeon was discharged from the case about three months later. The physician employed after that was also discharged in a few months. I saw it in consultation with Dr. O. about the middle of November last. The infection at that time extended from the foot to the lower third of the leg. The joint had been infected, probably from septic material draining from the cut along the tibia into the ankle joint. The joint was being drained through the heel. We operated under a general anesthetic. We opened the joint over the inner malleolus; drainage was by packing the synovial cavity with sterile gauze which was removed once every twenty-four hours. The after-treatment consisted of daily massage, first of the calf, then the shin of the leg. The plantar and dorsum of the foot were next briskly rubbed. The joint proper was more gently treated, with the tips of the fingers the outlines of the joint was first followed. Passive motion was then performed with one hand holding the leg above the ankle and the other hand holding the tips of the toe, the foot was rotated in circumference giving the joint physiological movements in all directions. The case had been left under my temporary care, owing to the fact that Dr. O. lived thirty-five miles away. The patient was then about eight miles from me and I could see him at first only every other day, and later only every third day. The treatment had to be intrusted to his sister who acted as nurse. Under this treatment improvement was satisfactory. The wound in the heel which was draining the ankle joint healed. Treatment was, however, relaxed too soon and the young man began to work. The heel which had been entirely healed, broke open again. The young man is now living in the same town that I do. He comes to my office every morning. This is the routine treatment he is receiving: the limb is anointed with a one per cent. solution of menthol in liquid petrolatum. (This ointment is not employed on account of its antiseptic properties. The benefits we expect to derive from it is the lubrication it gives to the skin while rubbing.) First the calf and shin of the leg are rubbed with the palm of the hand, in an up and down motion, the two hands enveloping the leg. The foot is next rubbed, one hand on the plantar surface and the other one on the dorsum. The ankle and the heel are next in order, both are massaged with the palm of the hand. Under this treatment the drainage through the heel has ceased to flow, and the fistula is rapidly healing. The patient is able to walk without a stick or support, only limping very slightly. I am confident that the patient will entirely recover in a few months' time and will have an entirely useful limb.

EPIDEMIC OF TYPHOID FEVER FROM CONTAMINATION OF MISSOURI RIVER WATER.

By O. W. H. Mitchell, M. D., Columbia, Mo.

The town of Parkville, Missouri, is located about twelve miles northwest of Kansas City, on the Missouri river. The town has a population of nearly fifteen hundred inhabitants, and Park College, located there, has an enrollment of about four hundred students. There is a sewerage system in the town with which about one-third of the closets and the sewers



of the college are connected. The water supply is furnished from a plant owned by the school. Water is pumped from the river into a reservoir and from the reservoir into the water mains.

On August 7, 1909, a case of typhoid fever occurred in Parkville. The house where this case was located is on the sewerage system. About this time, for a period of from twenty-four to forty-eight hours, there was no current where the water in-take was located. About four weeks later,

an epidemic of typhoid fever occurred at the college. There were between thirty and forty cases. Boiling of the water was begun immediately. A favorable report, based upon bacteriological examination of the water, having been received by the school authorities early in October, the boiling of the water was discontinued.

About the fifteenth of November, a second outbreak (about fifteen cases) occurred at the college. The last case occurred December first. There has been one death at the college; none in the town and country.

About the first of December this laboratory was asked to make an examination of the water. Samples of tap water were collected by myself from several points at the college and in town, on the seventh of December. These samples were kept iced, and cultures were made in twenty-four hours. Gas was formed in fermentation tubes within sixteen hours, and gave a ratio of H CO_2 2:1. The bacteriological count was 14,500. Upon litmus lactos agar, acid-producing colonies developed, which were found to be colon bacilli. The organisms were motile, produced acid and coagulation of litmus milk, produced gas and acid in litmus lactos agar, and gave a positive indol reaction.

The results of the bacteriological investigation, taken in consideration with the conditions existing at Parkville prior to, and at the time of, the outbreak of the epidemic, shown in accompanying illustrations, can lead only to the conclusion that the epidemic had its origin from a contaminated water supply.

An appropriation has been made by the college whereby the entire system may be disinfected, and the location of the water in-take changed.

In this investigation I was greatly assisted by Dr. J. Underwood, Health Officer at Parkville, President L. M. McAfee, of Park College, and Professor Walter McNab Miller, of this Laboratory, all of whom I wish to thank.

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ADDRESS ALL COMMUNICATIONS TO METROPOLITAN BUILDING, ST. LOUIS, MO.

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E. J. GOODWIN, M. D., Editor.

PUBLICATION COMMITTEE:

Walter B. Dorsett, M. D., Chairman. M. B. Clopton, M. D. M. C. Shelton, M. D.

EDITORIAL

THE HANNIBAL MEETING OF THE ASSOCIATION.

The fifty-third annual meeting of the State Association will convene in Hannibal, May 3 to 5. The program committee is working hard to collect an interesting lot of papers for the scientific program and the outlook at present is extremely favorable for a most successful meeting. The Marion County Medical Society is arranging for the entertainment of the members and will have a delegation meet all trains to conduct members to their hotels and make them welcome. All members who expect to read papers at the meeting, should send the titles at once to the officers of the section in which the paper will be read.

A strong effort is being made to have all committees in the House of Delegates prepare their reports in time to permit the sending of copies to the delegates thirty days before the meeting takes place, so that the delegates may be familiar with the business affairs that will come up for consideration and arrive at a conclusion as to what disposition should be made of the recommendations in these reports. In this way all business matters of the House can be completed on the morning of the first day. On the afternoon of this day a general session will be held, before which will be read such reports as the report of the Committee on Cancer, the Committee on Legal Defense, the Committee on Tuberculosis, the Committee on Medico-Legal Expert Testimony, all of which subjects touch the physician in his daily practice and are of vital interest to every

member. If this program is adhered to, the remaining two days of the meeting can be devoted entirely to the scientific work of the sections.

The St. Louis members are arranging for a trip by boat from St. Louis. We present in another column an announcement of this trip, and urge all members who can take advantage of the conveniences of this special arrangement to communicate at once with the committee in charge.

BOARD OF ADMINISTRATION FOR STATE HOSPITALS.

The inauguration in Illinois, on January 1, 1910, of the Board of Administration to supplant the former system of control of State eleemosynary institutions by local boards of managers—a system that is still in force in Missouri—marks a step that is certainly in the right direction.

We are not of those who believe that whatever is is bad and should, therefore, be changed. For forty years the system under which Missouri is working was faithfully tried in Illinios and, to its credit we may say, it brought about in part the improvement in the care of the State's wards that its creators hoped for. But experience has shown the faults of the plan, as well as its benefits, and pointed the way to a more logical means of attaining the best results in the care of the sick poor of the State.

The Board of Administration is the executive board and supplants the local boards of managers and the State Board of Charities in all administrative and quasi-administrative powers of its service. A Charities Commission succeeds to the visitorial, inspectional, critical and recommendatory duties of the State Board of Charities; local Boards of Visitors have purely visitorial and recommendatory functions and serve as dependencies of the Central Charities Board.

Under such an efficient system of centralized responsibility, many leaks in the finances will be stopped and much of that demoralizing influence, petty institutional graft impossible to prevent under a less strict management, will be prevented by the Illinois plan.

When the merit system in the selection of officers and employees of State charitable institutions of Missouri has been firmly established, we hope to see our State follow the same wise policy adopted in Illinois. Local boards may still be usefully employed; but they should be free to act for the good of the institutions and entirely independent of the incessant demands of local politicians for soft places and of local merchants for a part of the trade. The duties of the local boards will be more directly concerned with the personal welfare of the patients,—visitorial and recommendatory.

Missouri has not been entirely thoughtless of the deficiencies of the

present system, for a bill was introduced in the last legislature by Representatives Muir, of Lewis County, and Brasfield (now deceased), of Putnam County, providing for a bi-partisan board of four members to be appointed by the Governor, with duties following closely the provisions of the Illinois law. The bill passed the House with votes to spare, in spite of vigorous opposition, led by Mr. Crossley, of Johnson County. It did not, however, reach the Senate in time to be taken up by that body, which was necessary before it could become a law. Similar bills have been killed or vetoed in other sessions.

This is a subject that concerns the medical profession and should have serious discussion in county society meetings and at the annual sessions of the Association, to the end that all the influence of the organized profession be directed toward establishing the most improved methods of managing and controlling our State charitable institutions.

ABOLITION OF THE COMMON DRINKING CUP.

The movement for the abolition of the common drinking cup is spreading to all parts of the country. Kansas was the first state to take decisive action by ordering all railroad companies to discontinue the use of the common drinking cup on trains passing through the state, and the action was sustained by the attorney-general.

From the *Bulletin* of the Municipal Commission on Tuberculosis, St. Louis, we learn that the following states and cities have taken action to abolish this cause of disease spread:

"The State Board of Health of Michigan, in October, 1909, forbade their use on railroad trains and in schools.

The State Board of Health of Mississippi took similar action in October, 1909. The rule became effective January 1, 1910.

The State Board of Health of Kansas abolished drinking cups on railroad trains, in stations, and in all schools, September 1, 1909. The attorney-general of Kansas sustained the action of the board.

The New Jersey Board of Health, in August, 1909, condemned the common use of the public drinking cup and recommended that all railroads discontinue furnishing the same.

Commissioner of Health Eugene H. Porter, of New York, Secretary Dixon, of the Pennsylvania Board of Health, and Secretary J. N. Grassick, of the North Dakota Board of Health, have publicly condemned the common drinking cup.

The Board of Health of New Orleans has prohibited the common use of cups in schools.

The South Pasadena, Cal., Board of Health has prohibited the

common use of drinking cups in schools, institutions, and other public places.

The Service Board of Dayton, Ohio, ordered the abolishment of all cups after September 1, 1909, at fountains which are controlled by the municipality.

The School Superintendent of Milton, Pa., has required all pupils to furnish their own cups.

The New York hospitals are furnishing several thousand cups a day to patients in dispensaries.

A number of leading railroads in the country have abolished the public cup and furnish slot machines which sell paraffin cups."

This information is embodied in a recommendation to the Municipal Assembly of St. Louis, making a strong appeal for taking immediate steps to prohibit the use of these cups in the city of St. Louis. An ordinance drawn up by the Commission, providing for this action, was also submitted and its passage earnestly advocated.

The Commission is doing splendid work in every direction for the conservation of the public health and should have the united support of the medical profession.

STATE BOARD OF HEALTH RULES UPHELD.

The Supreme Court has reversed the decision of the Circuit Court of St. Louis in the case of the students of the Barnes Medical College, class of 1908, against the State Board of Health for refusing to examine the class on the ground that the Barnes Medical College was not in good standing because it had not met the requirements of the Board and did not comply with the rules for the minimum equipment in teaching. The Supreme Court remanded the case with instructions to quash the writ of mandamus against the Board and dismiss the petition of the students. The interesting feature of the case is the establishment of the legality of the Board's action in promulgating rules for judging of the reputability of medical colleges, which rules the Supreme Court holds are not only reasonable, but wise and just. Another principle is established by the ruling in this case, namely, that of placing upon the student the responsibility for entering a college without first having satisfied himself that it is reputable.

On another page we print the full text of the court's opinion.

THE ST. LOUIS SURGICAL SOCIETY.

The St. Louis Surgical Society has been a most influential factor in the medical profession of St. Louis and a generous contributor to the financial support of every movement to advance the interests of the

medical affairs of that city. It is well known in the surgical world, not only for the professional attainments of its members, but also for its generous hospitality in entertaining visiting surgeons.

The St. Louis Medical Library Association had its inception in the meetings of this body and its members were the first to contribute funds to start the library and interest the profession in establishing a medical library in St. Louis. Previous to this action the only reference library for physicians was at the Public Library, but it was incomplete and unsatisfactory. During the World's Fair the Society entertained a number of eminent surgeons from foreign countries and was host to the American Surgical Society.

While it has contributed considerable sums annually to the Library Association, the latest evidence of its interest in supporting the library is the donation of $1,000 for the Elisha Hall Gregory Endowment Fund. We understand this action on the part of the Surgical Society has prompted another medical body in St. Louis to consider adding to this fund by contributing a large sum out of its treasury. We hope we shall have the pleasure of announcing this contribution at an early date.

MORE OBJECTIONABLE ADVERTISING.

We have received a letter from the secretary of Adair County Medical Society enclosing a newspaper advertisement of a hospital in Kirksville to which the county society expresses strenuous objection. Here is the advertisement:

> H—is for ———'s HOSPITAL,
> The sick should know
> It's the best place to go,
> And the rates are quite low.
> ———'s HOSPITAL, clean and sanitary,
> The rooms large and airy
> Your "Family Doctor" can attend,
> ——— Welcomes all ethical men.
>
> Facts:
>
> Everything in the building planned for safety in surgical cases. Separate sterilizing and anesthetic rooms are provided. Dressings and Instruments are sterilized thoroughly before using. All modern surgical apparatus. The most up-to-date in N. Mo.

This is the second warning Adair County Society gives to the members guilty of indulging in newspaper advertising. The county society desires to warn the guilty members that if these practices are continued, the censors will take action to discipline them.

At the March meeting of the Clay County Medical Society a resolution will be acted upon, "to exclude from membership any physician who advertises in any paper, leaflet or by personal means."

RIVER EXCURSION TO HANNIBAL.

Are you going to the meeting of the State Association? If so, how would you like to make the trip by boat from St. Louis to Hannibal? If a sufficient number of members avail themselves of the opportunity, the side wheel steamer "Cape Girardeau" will be chartered for the exclusive use of members of the Association and their families, the boat remaining at Hannibal during the session and returning immediately afterward. The Eagle Packet Company agrees to furnish meals and berth en route and while at Hannibal; also an orchestra, and guarantees good meals and good service. The boat, which has a capacity of 140, can be chartered for $1500. If 125 people or more make the trip, the charge will be $12.00 per person.

The advantages of such an excursion are many. Leaving St. Louis on the afternoon of May 2nd, the river trip should prove especially delightful at this spring season. While listening to the music, we will have the opportunity of becoming better acquainted with our fellow members. On reaching Hannibal, there will be no uncertainty about accommodations or meals, for we are to live and eat on board. The return trip will be made on the afternoon of May 5th.

This trip should prove attractive to all members who would ordinarily pass through St. Louis en route to Hannibal, and also to others who would prefer to go a little out of their way for the sake of participating in what should prove a thoroughly enjoyable outing.

Think it over and make up your mind to join us. Come yourself and bring your wife and family. Please send name, address and number of reservations desired to Dr. John Green, Jr., 625 Metropolitan Building, St. Louis, or Dr. Clarence Loeb, 208 Humboldt Building, St. Louis. If for any reason the trip is abandoned, you will be notified.

ASSOCIATION BUTTON.

We reproduce a fac simile of the Association button now for sale to members. It is made of rolled gold with a blue back ground and a red cross within a white cross. This button will take the place of badges

hitherto used at annual meetings although probably a small ribbon will be worn. Every member should possess one of these buttons, and we hope there will be a large sale, for it is surely a badge of fellowship that

all should be proud to wear. The price is one dollar. Orders should be sent to the secretary, Dr. A. W. McAlester, Jr., Bryant Bldg., Kansas City, Mo.

AMERICAN MEDICAL DIRECTORY.

The second edition of the American Medical Directory from the press of the Association, 535 Dearborn Ave., Chicago, shows considerable improvement over the first edition. The book is one that every physician who has occasion to consult a medical directory, should have in his library, for the information is obtained directly through Association circles and is compiled with a view of giving the greatest amount of information that will be essential to practising physicians. This edition contains over 10 per cent. of new names and more than 20 per cent. of matter than the previous issue. It also contains two additional items of information concerning physicians, viz.—the professorships held on medical college faculties and the special lines of practice followed.

EDITORIAL NOTES

The Conference of Superintendents and Board of Managers of Missouri State Hospitals, to be held at Kansas City, March 15 and 16, will be a most interesting and important meeting. The program includes papers on every phase of management, control and treatment of the insane, the epileptic and the feeble minded wards of the State. Dr. G. Wilse Robinson, of Kansas City, is president of the Conference. Our limited space precludes the publication of the program, but we hope to present some of the papers read at the Conference in later issues of the Journal.

We regret the rather antagonistic tone assumed (editorially) by the *Bulletin of the A. Ph. A.* (December, 1909), as regards the competency of physicians in judging therapeutic value, dosage, etc., of articles to be included in the U. S. Pharmacopœia. In spite of all assertions to the contrary that may be made by pharmacists, it is, after all, the physician who decides what articles should or should not be included in the U. S. P., certainly not the pharmacist as he only prepares what the physician orders. It seems most desirable that we should do everything in our power to secure the advice and coöperation of leading physicians and medical educators in revising our Pharmacopœia.—*The Pacific Pharmacist.*

Physicians Should Know More About Pharmacy.—With the increase of the practice of dispensing by physicians, it becomes desirable to add to the pharmaceutical knowledge and skill of the medical practitioner. More instruction on pharmacy to the medical student will give the medical profession a broader, as well as a better knowledge of pharmacy, and cause physicians to realize more fully the responsibility which rests upon the shoulders of the dispensing physician. It will cause the physician to have greater respect for the competent pharmacist, and have a tendency to diminish rather than increase the extent of dispensing by physicians.—*Meyer Bros., Druggist.*

Dr. Tinsley Brown, President of the Association, delivered an address on public health questions at Aurora, on December 22nd, when the Lawrence-Stone County Medical Society held an open meeting. The sentiment aroused in this meeting showed that the people are taking a deep interest in public health matters and are ready to coöperate with the profession in every effort for better sanitary and hygienic measures, both in private and public life. One of the results of the meeting was a movement to establish a district hospital at Aurora. The Reverend H. H. Burch introduced a resolution which was unanimously adopted, calling for the appointment of a committee to formulate plans for the hospital. The committee was appointed and consists of the following: From Aurora, Drs. Ament, Fleming, Harding, Madry, Melton, Mider, Stevenson, Townsend and True, Messrs. Henry Scott, Will Elsey, S. H. Minor, C. G. Thompson, G. H. Wittram, N. Logan, Rev. Fergerson, Rev. Prater and Rev. H. H. Burch; from Mt. Vernon, Dr. Shelton, vice-president Lawrence-Stone County Medical Society; from Monett, Dr. Hawkins; Verona, Dr. Loveland; Crane, Dr. Huffman; Galena, Dr. Henson; Marionville, Dr. Andrews, president of the Lawrence-Stone County Medical Society; Pierce City, Dr. Rodman.

Dr. John Stewart, of St. Louis, has been appointed superintendent of the State Sanatorium for Incipient Tuberculosis at Mt. Vernon. Dr. Stewart is a graduate of the Barnes Medical College (1904) and has been practicing in St. Louis since his graduation.

Dr. Stewart is a member of the St. Louis Medical Society and the State Association. He is a capable physician and earnest worker but has had little practical experience in dealing with tuberculosis. The Board of Managers doubtless exhausted their resources in selecting a competent physician who was willing to accept a position that offers little to an ambitious doctor except the opportunity to pursue a certain line of study and research. The Sanatorium at Mt. Vernon is one of Missouri's most important educational institutions in the war against tuberculosis out of which ought to come much knowledge of the best methods of preventing and curing this disease.

Quackery and Felony. In the prosecution of advertising quacks one of the difficulties in the way of securing a conviction is the tendency of a lay jury to look at the action brought as a species of persecution skilfully engineered by the ethical members of the medical profession. This tendency is, of course, encouraged by the quack and used for all it is worth and he assumes the pose of a martyr to professional jealousy. Human nature is so constituted that, while it looks on the commission of a misdemeanor with leniency, it views a felony with unequivocal disfavor. The case recorded in the Pharmacology department of this issue* is a case in point. The individual prosecuted was charged, not with practicing medicine without a license, but with obtaining money under false pretenses. Here there was no opportunity to assume the rôle of injured innocence. The "gold-brick" swindler caught red-handed could as consistently cry "persecution" as could a physician who had taken money for making a fake diagnosis and pretending to "cure" the condition thus "diagnosed." The eminently sensible ruling of the court, in the case here referred to, that physicians should be permitted to testify as to certain conditions as matters of fact rather than merely as matters of opinion, will, if sustained by the higher courts, do much to render the quack's cry of persecution flat, stale and unprofitable. The important point in connection with this case, however, is that under such charges the prisoner becomes but a common felon and on a par with the ordinary porch-climber or sneak-thief. While the layman may experience some difficulty in recognizing the danger of quackery *per se*, he finds no such obstacle in a case of plain robbery. The average man is perfectly willing to play fast and loose with his health, but he objects to any such harsh treatment of his purse. Let the public once realize that quackery and robbery are usually synonymous, and the outcome of legal action instituted against quacks may be safely predicted.—*Jl. Am. Med. Assn.*

PERSONAL AND NEWS NOTES

Dr. Albert S. J. Smith, of Dearborn, Mo., has composed the words for a vocal quartette, entitled "Imperial Missouri," which was set to music by his wife, Mrs. Attie May Smith.

Dr. F. J. Taussig has been appointed chairman of the committee appointed by the American Medical Association to revise the section on obstetrics of the United States Pharmacopeia.

Drs. Whelpley, Behrens and Falk have been appointed delegates of the St. Louis Medical Society to represent the Society at the meet-

*January 29, 1910.

ing of the Convention of Pharmacopeial Revision, which is to meet in Washington next May.

The State Medical Society of Wisconsin has purchased the Wisconsin Medical Journal, and in future this publication will be owned and published by the State Medical Society as the official organ of this body.

The St. Joseph-Buchanan County Medical Society has taken active steps toward establishing a medical library. The plans at present contemplate the assignment of quarters in the Public Library at St. Joseph for the use of the physicians.

Dr. Otto A. Wall, of St. Louis, and Drs. R. T. Sloan and Robert Block, of Kansas City, have been appointed delegates from the Missouri State Medical Association to the Convention for the Revision of the Pharmacopeia at Washington next May.

Officers elect of the Alumni Association of the Medical Department of St. Louis University, for 1910: President, Dr. Rollin H. Barnes; vice-presidents, Dr. Frederick W. Bailey, Dr. Percy H. Swahlen; recording secretary, Dr. Alfred Bode; corresponding secretary, Dr. Guy L. Qualls; treasurer, Dr. W. D. Aufderheide.

The eleventh annual dinner of the Medical Society of the City Hospital Alumni (St. Louis) was the best attended in its history. Over one hundred and twenty members and guests gathered at the Marquette Hotel on Thursday, January 6th.

Dr. Frank Hinchey made his inaugural address, being introduced by Dr. Walter Baumgarten, the retiring president. Dr. Geo. Homan read a history of the Society. The other speakers were Dr. Francis Reder and Dr. Amand Ravold.

The guests were Mr. J. H. Gundlach, president of the City Council; Councilman Chas. Espenschied, Mr. E. C. Rombauer, speaker of the House of Delegates, and Dr. J. A. Walker.

The pending bills for the management of the municipal hospitals was the principal theme for discussion.

The Society of Medical History of Chicago has been recently organized, with Dr. Isaac N. Danforth as president, Dr. N. S. Davis as vice-president, and Dr. George H. Weaver as secretary.

The society has been formed for the purpose of systematically collecting and permanently preserving in an accessible manner any matters which are or will become of interest in connection with the medical his-

tory of institutions, organizations and individuals, especially of Chicago and the surrounding states.

The society asks the active support and help of the profession in its efforts to secure the desired materials. It makes a special appeal to those outside of Chicago for anything antedating the Chicago fire. It will gladly coöperate with other organizations operating in similar lines. Everything collected by the society will, as soon as possible, be so arranged as to be accessible to any person doing research work in medical history. Gifts to the society will be duly credited to the donors.

All communications should be sent to Dr. George H. Weaver, secretary, 1743 West Harrison street, Chicago.

CORRESPONDENCE

February 7, 1910.

To the Editor Journal, Missouri State Medical Association:

My attention has been called to an article in a recent publication of your paper in reference to my reported position upon the "hookworm." The article published in your paper is based upon a misunderstanding of the facts. I have never taken any position publicly or privately in reference to the existence of the hookworm, and the newspaper story which I assume was the basis of this article, was based upon a remark jokingly made by myself to the newspaper correspondents at Jefferson City. I received a letter asking me for the names of the persons that I had appointed as delegates to the Hookworm Convention at Atlanta, Ga. I happened to state to the newspaper correspondents when they called for news, that I had not been requested to appoint any delegates to this convention, and if I had been, I would be at a loss to know whom to appoint, unless the Jefferson City correspondents would accept the position themselves. I also added that I assumed that I had not been requested to make the appointments because, so far as I knew, Missouri was not interested in the question. The newspaper men undertook to write up a facetious article based on this incident and either failed to make it facetious, or else your editor was lacking in sufficient sense of humor to understand their purpose. I request that you publish this statement in order that my position in this matter may not be misunderstood by the physicians of the State.

Very truly yours,

HERBERT S. HADLEY,
GOVERNOR.

[But Missouri was not represented.—ED.]

To the Secretary of each State and County Medical Society, and Other Interested Members:

At the last meeting of the American Medical Association at Atlantic City the following report of Committee on Miscellaneous Business was adopted: "The committee recommends that the President of this Asso-

ciation appoint a committee of five members to inquire into the desirability and practicability of the establishing under the auspices of the American Medical Association of a fund for the assistance of physicians disabled by sickness, and for a sanatorium for the treatment of such members of the Association, as may be afflicted with tuberculosis or similar diseases; such committee to report to the House of Delegates at the next annual meeting of the Association."

As a basis for wise action the Committee urges that the officers of State and County Medical Societies, and others interested in the subject, should at the earliest possible date, forward to the Secretary of the Committee, Dr. A. C. Magruder, Colorado Springs, Colorado, answers to the following queries, with some account of any special cases that seem to illustrate the need for provision for disabled members of our profession.

1. Is there any provision by your State Medical Society, or local society, for the care of destitute and disabled physicians and those dependent upon them? If so, how is such care provided?

2. What number of instances of special need for such assistance (or Sanatorium treatment) have arisen in your locality in the last five years and what number of your members need such assistance now?

3. About how many members of your County Medical Society are at present afflicted with tuberculosis or similar diseases; or have, within the last five years died, or withdrawn from professional work on account of such disease?

It is earnestly requested that this matter be brought before each County and State Society at its next regular meeting; and that the desired information be furnished our Committee at the earliest possible date.

Fraternally yours,

Edward Jackson, Denver, Colorado.
Jefferson R. Kean, Washington, D. C.
A. T. Bristow, Brooklyn, N. Y.
H. B. Ellis, Los Angeles, California.
A. C. Magruder, Secretary, 305 N. Tejon Street, Colorado Springs, Colorado.

Editor Journal Missouri State Medical Association:

One would suppose after seeing so much incompetency and mismanagement in the handling of our eleemosynary institutions, that when the State opened a new branch of government those in charge of the new branch would profit by the mistakes of their brothers in charge of the older kindred divisions. One would think little excuse now existed for making a broader and more extended effort to crown medicine with success and reflect honor on the State through the further substitution of a politico-scientific mongrelcy for what ought to be the most altruistic science.

There is such a thing in law after proving the crime, as *failure to join the defendant to the crime.* The medical profession of the State pleads *"not guilty"* to the charge and denies all responsibility for the mismanagement of the institutions. This is to apply also with respect to the charge that *will* be made against our profession for any incompetency and inefficiency of appointees to collect the vital statistics.

When called to face the charge of mismanaging the public institutions entrusted to our care, the medical profession must with humility admit

the disgrace but deny the responsibility. That these institutions have been entrusted to the care of someone who was registered as a physician is not sufficient grounds on which to establish a charge that the *profession* is guilty. In none of the instances was the profession consulted and in none of the instances could the profession have prevented, by reasonable means, the appointments that were made. Too often these appointments are controlled or determined by some one or more old political bums, who, though they may also be doctors for revenue only, in the kaleidoscope of human events, show up on a board of managers of an institution. It is easy to see, with the appointive power in such hands, how the State may remain in the dark as to how many ribs of a ward can be broken without disturbing the repose of a superintendent, or why butterine and water are not just the things to fatten those for whose support only fifty dollars a month has been considered sufficient; and vital statistics, collected by those who have ever taken "leg bail" from the presence of a court, will, of course, be properly (?) recorded, when to do otherwise would arouse unpleasant reflections on two lives that went out, and the loss to business while an irate father's anger cooled.

The medical profession of the 28th District must not be adjudged guilty of past nor of future mismanagement of the State institutions while I remain its Councilor, except over my protest, until the profession has been consulted with reference to the various appointments. I wonder how long partisan politics is going to dominate the selection of these appointments ere it confesses its ignominious failure; and how long we, a blinded Sampson, will continue to make sport, before we disregard our own hazard and bring the reign of folly to a close!

It has long been a custom in civil government to entrust the enforcement of a measure to those who were interested in its introduction and in its enactment into law. What would the people, irrespective of party, say if President Taft had placed three-fifths of his appointments in the hands of those who were inimical to the things for which he stood? Yet that is the policy of the State Board of Health, at least as applied to this (Lawrence) County, in putting the Vital Statistics law in operation. With the greatest humanitarian institution of the State located in our midst, rearing its ugly record to our discredit, we feel that our local Society ought to have been spared further degradation. Though innocent of all deeds of omission or commission, we have borne the contumely and disgrace in silence for the good of the institution; but that point at which forbearance ceases to be a virtue was passed when the State Board of Health deliberately appointed the cracked and the corrupt to carry out a law that would never have been heard of but for those of high ideals in medicine organized for efficient service. Had the remaining two-fifths of the appointments to collect the vital statistics been properly distributed, no objections could have been raised to these. They are physicians that would bear worthily any honor that the State is likely to confer; nor, are the three-fifths *all* disreputable and without honor; but why, if not at the dictation of some old political boss, name these for the enforcement of so important a law when better men and known friends of the law are to be had in the same locality? We conclude that the two-fifths were appointed to their positions through accident or necessity rather than choice.

In these days of high-priced living and exorbitant and unfair legal demands upon members of the profession, fawning and flattery, base servitude on the mandates of the master, and the sacrifice of ethics and truth itself to win and keep the favor of some two legged old hog that

happens to be the pass—or patronage—dispenser, have reasons (poor to be sure) for their existence; but why will the State Board of Health make a breach on the organized profession, and invite in those who are, to say the least, not its friends, to guard its welfare and its sacred honor? If the medical profession ever hopes to attain to the honored position its purposes inspire, it must demand of its members that they each—every man a brick—*merit respect;* nor is this all for that which is wrong or degrading must be condemned and consequences allowed to take care of themselves. Honors, however insignificant, must not be taken from those who have labored long and faithfully to uphold the higher ideals, to be bestowed recklessly on others who have labored just as long to tear these ideals down. Let us find the line and hew to it or condemn the whole scheme as a political sham. Our State Board of Health, if they cannot advance with our rising tide should not recede; if they cannot elevate, they should not lend assistance to those who would tear our ideals down.

A. H. Madry, M. D.,
Councilor, 28th District.

COUNTY SOCIETY NOTES

ADAIR COUNTY MEDICAL SOCIETY.

The regular meeting of the Adair County Medical Society occurred on Thursday, February 3, 1910, at the office of Dr. E. C. Callison, Kirksville, with the following members present: Drs. Quinn, Gashwiler, Derfler, Callison, Butler, Conner, Grim, Chandler and Bert Parrish.

A communication from the secretary of the State Board of Health was read, concerning W. E. Munn, of Pure Air, practicing medicine without a license. A motion was made and unanimously adopted by the society to urge the prosecuting attorney of Adair County to act upon this matter as soon as possible.

A communication to Dr. J. S. Gashwiler, of Novinger, concerning the vital statistics law was read and discussed.

The scientific portion of the program was then taken up. Dr. J. S. Gashwiler, of Novinger, read his paper on "A Few Suggestions on the Medical Treatment of Minor Surgical Injuries." This was a very fine contribution and demonstrated careful preparation and an intimate knowledge of this subject. The paper was freely discussed by all present and a number of valuable suggestions were brought out.

The application of Dr. H. J. Rankin, of Kirksville, for membership in the society was read. The board of censors reported favorably and by suspension of rules, Dr. Rankin was unanimously elected a member.

Adjourned to meet the first Thursday in February, 1910, at 7 p. m., with Dr. T. R. Butler, of Kirksville.—Bert Parrish, M. D., Secretary.

CAPE GIRARDEAU COUNTY MEDICAL SOCIETY.

The Cape Girardeau County Medical Society held its regular monthly meeting February 14th in Dr. Howard's office, with the following mem-

bers present: Drs. Cunningham, Hope, Howard, Moore, Schulz, Wichterich and Wilson.

As a certain physician has been claiming he was a member of the State Association and not of the county society, the secretary presented communications showing the statement of this physician to be false. By unanimous vote, the society endorsed the action of the secretary.

The standing committees made their reports which were approved.

Program for the evening: "Puerperal Septicæmia," by Dr. G. B. Schulz. As usual, for the doctor, he covered the subject and the paper created a good discussion. "Migraine," by Dr. Wilson. The paper was well received and numerous cases from practice were reported by physicians present. From these reports it was found that true migraine is not very common.—E. H. G. Wilson, M. D., Secretary.

CASS COUNTY MEDICAL SOCIETY.

The Cass County Medical Society met in Harrisonville, Mo., on February 3rd. The attendance was not large but the meeting was an interesting one. Dr. J. S. Triplett reported an interesting case of nephritis, with microscopical specimens of hyaline casts which the members took great interest in examining.

Dr. R. E. Chaffin read a paper on "Sanitary Prophylaxis." This was a very interesting and profitable paper along the lines of public sanitation and prophylaxis. It was freely discussed by Drs. Ramey, Overholser, Triplett and Crawford.

The Post-Graduate study was next taken up, and consisted of a quiz on "Anatomy of the Thoracic Wall and Diaphram," by Dr. J. S. Triplett. This proved to be a very interesting feature of the program, and all present were of the unanimous opinion that it was for the best interests of the medical profession of our county.

The vital statistics law was discussed and the society urges upon all of the doctors in the county the importance of reporting all deaths and births to their local register.—H. S. Crawford, M. D., Secretary.

CHARITON COUNTY MEDICAL SOCIETY.

The society convened at 7:30 p. m. February 10, 1910. In the office of Dr. G. W. Hawkins. Those present were J. D. Brummall, Otis T. Morey, C. A. Jennings, G. W. Hawkins, W. O. Hawkinson, J. D. McAdam, and President R. D. Epperly in the chair.

The regular business of the society transacted with the regular scientific program. Arrangements were perfected for our public meeting on March the tenth next, when addresses will be delivered by Dr. Tinsley Brown and Dr. Frank J. Lutz. The president's address of last year, Dr. G. W. Hawkins, which had been laid over was called for and read at this meeting. And on motion of the society the secretary was instructed to send the paper to the Journal with the request that the same be published; also our society report.—G. W. Hawkins, M. D., Reporter.

CLAY COUNTY MEDICAL SOCIETY.

The regular monthly meeting of the Clay County Medical Society was held at Excelsior Springs. Dr. Sevier and Dr. Matthews were the

only physicians of Liberty who were able to be present. The program consisted of a joint paper, prepared by Dr. Y. D. Craven and Dr. J. J. Gaines.

A resolution, to be voted upon at the March meeting, was presented. It is a recommendation to exclude from the membership of the society any physician who advertises in any paper, leaflet, or by personal means.

The next meeting will be held in Liberty the last Monday in February.

COLE COUNTY MEDICAL SOCIETY.

Cole County Medical Society held its regular monthly meeting at Jefferson City February 10th, 1910, with the following members present: Drs. C. P. Hough, J. L. Thorpe, I. N. Enloe, H. G. Dallas, M. R. Aldridridge and J. S. Summers. Dr. Miller, of Sedalia, was a visitor.

After the regular routine of business was transacted the application for membership of Dr. Ernst L. Haffner, of Hermann, was read and he was unanimously elected a member of our society.

Dr. I. N. Enloe demonstrated a special splint of his own construction. The subject of fractures was taken up and an interesting discussion followed.

Dr. H. G. Dallas reported an interesting case of prepatellar bursitis.

The society meets regularly on the second Thursday night of each month.—J. S. Summers, M. D., Secretary.

GREENE COUNTY MEDICAL SOCIETY.

The Greene County Medical Society met in regular session Friday, February 11th. The president has just recovered from a severe attack of pneumonia, which prevented him from assuming the duties of his office until the last regular meeting. Vice-president Dr. D. U. Sherman, however, appointed the committee on Scientific Communication and Program at the regular meeting in January. Dr. Wm. Smith, Dr. B. F. Fortner and Dr. C. A. Moore comprise this committee and a program of unusual interest for the present year is promised. The program will be published and ready for distribution by the next regular meeting, February 25.

During the past year the society through its committee on water supply has been instrumental in securing for the city a new filtration plant which will provide an unlimited supply of pure, clear water. This will undoubtedly prove a great benefit to the city. In recognition of the faithful and untiring efforts of the committee in inducing the Water Company to install the new filtration plant, the president honored each member by reappointment on the same committee for the present year. The committee is composed of Dr. B. F. Fortner, Dr. C. E. Fulton, Dr. D. B. Farnsworth, Dr. F. B. Fuson and Dr. C. E. Woody. Other committees appointed were: Public Health and Legislation, Dr. W. A. Camp, Dr. G. W. Barnes and Dr. J. P. Ralston. Library Committee, Dr. S. W. Tickle, Dr. T. A. Coffelt and Dr. H. S. Hill.

Dr. J. P. Furgeson of the Frisco Hospital, was elected to membership. Dr. G. B. Dorrell real a carefully prepared paper on "Diseases of the Stomach." At the next regular meeting, February 25th, Dr. S. W. Tickle will read a paper entitled "Business Hints."

At the regular meeting in December, 1909, the following officers for 1910 were elected: President, Dr. Thos. Doolin, Ash Grove; vice-

president, Dr. D. U. Sherman, Springfield; secretary, Dr. Thos. O. Klingner, Springfield; treasurer, Dr. D. B. Farnsworth, Springfield; censor, Dr. W. P. Paterson, Springfield.—Thos. O. Klingner, M. D., Secretary.

HENRY COUNTY MEDICAL SOCIETY.

The Henry County Medical Society met in regular session in the county court room on Wednesday, December 15, 1909. The members peresent were: Drs. Gibbins, Peeler, Shanklin, Berry, Bradley, Barr, Haire, McNees, Poague and Jennings.

Dr. Bradley, of Windsor, read a paper on "Pneumonia and Its Treatment," which was well prepared and thoroughly discussed by all members present.

Dr. A. Jackson McNees read a paper on "The Hookworm Disease." This disease and its treatment was discussed at some length, as Dr. Haire had been south and had investigated the malady to some extent.

The following officers were elected for the ensuing year: President, Dr. Edwin C. Peeler, Coal; vice-president, Dr. William P. Bradley, Windsor; delegate, Dr. A. Jackson McNees, Clinton; censors, Drs. Miller and Berry, of Montrose; secretary and treasurer, Dr. Samuel A. Poague.

HOLT COUNTY MEDICAL SOCIETY.

The Holt County Medical Society held its annual meeting in the office of Dr. Proud, at Oregon, on January 21. Those present were: Drs. Kaltenbach and Davis, from Craig; Quigley, E. M. Miller and John Tracey, from Mound City; Hogan, from Forbes; Hogan, from Bigelow; Woods, Thatcher, Klopp, Proud and Evans, of this city. Two new members were voted into the society. Dr. Quigley and Dr. Proud presented a report of interesting cases that were discussed by all present.

The annual election resulted as follows: President, Dr. W. S. Wood, of Oregon; vice-president, Dr. F. E. Hogan, Bigelow; treasurer, Dr. C. L. Evans, Oregon; secretary, Dr. J. F. Chandler, Forest City.

Dr. Ernest Kaltenbach announced that he had come to bid the society farewell, owing to the fact that he had made arrangements to go into other business in a distant state. He thanked his professional brethren for past courteous treatment and friendship and assured them that none but the kindliest feelings were in his heart for all the members and wished them a prosperous future. It was a case of the oldest brother of the family going away, for it was owing to Dr. Kaltenbach's efforts that the society was organized, and the members hated to give him up, but as he had chosen another field, he was assured by all that they parted with regrets and he carried with him the love and respect of all the members of the organization.

The next meeting will be held in Mound City, the first Thursday in April. It will be a public meeting—one that everybody will be invited to attend, as addresses will be made by some of the leading educators in the county, as well as members of the society. Drs. Quigley and Miller were appointed a committee to arrange a program.—J. F. Chandler, M. D., Secretary.

PETTIS COUNTY MEDICAL SOCIETY.

At the meeting of December 20, 1909, the following officers were elected: President, F. R. Morley; vice-president, C. B. Trader; secretary, C. A. McNeil; treasurer, Guy Titsworth; member of censor committee, S. G. Kelley.

After the election of officers, a paper entitled "Mouth Breathing: Its Causes and Effects," was read by Dr. Guy Titsworth and discussed by Dr. S. G. Kelley.

On invitation, the Pettis County Dental Society met with us and gave some very interesting talks on the subject from the dental viewpoint.

The society is forming classes for work on the cadaver. Arrangements are being made for procuring anatomical material from the State Anatomical Board.

At the meeting of January 17, 1910, Dr. D. P. Dyer was elected delegate to meeting of the State Association, with Dr. Guy Titsworth, alternate.—CHAS. A. MCNEIL, M. D., Secretary.

The Pettis County Medical Society met January 18 with a good attendance.

Dr. Albers was to have read a paper on "Nephritis," but could not be present at the meeting. Nevertheless the subject was taken up and fully discussed.

Dr. D. P. Dyer was elected as a delegate to attend the State Medical Association, which meets in May at Hannibal.

After all routine business matters had been disposed of the society adjourned.

PLATTE COUNTY MEDICAL SOCIETY.

At the December meeting of the Platte County Medical Society, the following officers were elected to serve for the coming year: President, Dr. G. C. Coffey, Hampton; vice-president, Dr. J. W. Shultz, Weston; treasurer, Dr. J. J. Carter, Weston; secretary, Dr. E. R. Hull, Camden Point; delegate to State Association meeting, Dr. J. J. Carter; district councilor, E. H. Miller, Liberty.

The meetings of the society are held on the first Wednesday of each month.

MEETING OF JANUARY 5TH, 1910.

The society met on January 5th at Platte City. Those present were: Dr. G. C. Coffey, Dr. Alva Naylor, Dr. H. M. Clark, Dr. S. Redman, Dr. E. R. Hull.

Papers were read by Dr. Spence Redman and Dr. E. R. Hull, followed by able discussions by others present.

The society will meet the first Wednesday in each month without fail and will have a good program for each meeting.

MEETING OF FEBRUARY 2D, AT WESTON.

The papers on the program for this meeting were as follows: "The Typhoid Epidemic at Parkville," by Dr. C. E. Benham, Parkville. Discussion opened by Dr. J. Underwood, Parkville.

"Gastric and Duodenal Ulcers," by Dr. C. H. Chastain, Weston. Discussion opened by Dr. Alva Naylor, Platte City.

"My Experience With LaGrippe," by Dr. J. W. Shultz, Weston. Discussion opened by Dr. J. B. Willis, Farley.

All physicians are cordially invited to attend. Come, meet with us; you are welcome.—E. R. Hull, M. D., Secretary.

STODDARD COUNTY MEDICAL SOCIETY.

The Stoddard County Medical Society met in regular quarterly session at Dexter, the first Wednesday in January, 1910.

The officers for the current year are: Dr. G. W. Vernon, Dexter, president; Dr. J. A. Tiller, Bloomfield, vice-president; Dr. John Ashley, Bloomfield, secretary; Dr. L. Burris, Puxico, treasurer; Dr. T. C. Allen, Bernie, reporter; Dr. H. LaRue, Dexter, delegate; Dr. John Ashley, Bloomfield, and Dr. Robert Ford, Leora, censors.

The program for the year was announced. The April meeting, which will be a public one, will be at Bloomfield, the July meeting at Bernie and the October meeting at Puxico.

Several reported cases of diphtheria were discussed. Rheumatism was discussed and an effort was made to separate and differentiate the many conditions so generally and erroneously grouped as rheumatism.—T. C. Allen, M. D., Reporter.

ST. JOSEPH-BUCHANAN COUNTY MEDICAL SOCIETY.

The regular business session was held February 3rd. Dr. McGlothlan, Chairman of the Library Committee, gave a detailed report of the committee's conference with the library board. He urged the acceptance of the proposition for placing a medical department in our public library. After some discussion pro and con the motion to accept was carried.

Dr. Lee offered an amendment to the by-laws to establish a library committee which shall have control of all matters pertaining to the medical library. The members of the committee to be appointed for one, two and three years respectively.

Dr. A. L. Gray reported that a very good incubator for the "Sheltering Arms" could be purchased for sixty-five dollars ($65.00), but no further action was taken in the matter at this time.

A communication was read from the secretary of the Andrew County Medical Society asking that we appoint a committee to confer with them in regard to affiliating with our Society, and Dr. Jefferies, who was present, addressed the Society in regard to uniting the two bodies. Dr. Elam also spoke in favor of the proposition. Upon motion the chair appointed Dr. A. L. Gray, Dr. John Sampson, and Dr. J. B. Reynolds a committee to confer with the Andrew County committee.

The application of Dr. H. P. Mills of St. Joseph, was read and referred to the board of censors.

Dr. E. S. Ballard presented an able paper on "Medical Examination and Inspection of School Children." Dr. W. T. Elam complimented the paper and suggested that it be read at a public meeting. This was offered in the form of a motion and carried.

Professor Whiteford, Superintendent of the Public Schools, was called upon and expressed himself in favor of a more practical system of examination of children as outlined in Dr. Ballard's paper, and cited

several cases in point. He was of the opinion that the school board was willing to do all in its power to carry out the suggestions of the medical profession along this line.

Dr. Morton suggested the appointing of a committee to confer with the school board at an early date. Dr. Vandivert called attention to the lack of care in the admission of school children, many of whom were too young and their physical condition would not warrant close study and confinement.

Dr. Gleaves thought this an opportune time to take action and urged the appointment of a committee. Dr. Bansbach offered as a motion the appointment of a committee to confer with the school board regarding a more rigid inspection of school children. Seconded and carried. The chair appointed Dr. Bansbach, Dr. Bell and Dr. Elam.—CHAS. WOOD FASSETT, M. D., Secretary.

STATE BOARD AND BARNES COLLEGE.

Below we print the full text of the decision of the Supreme Court in the case of the Barnes Medical College, class of 1908, against the State Board of Health for mandamus suit to compel the Board to examine the students for license to practice medicine in Missouri.

IN THE SUPREME COURT OF MISSOURI.

In Banc. October Term, 1909.

State of Missouri ex rel. James Wesley Abbott, et al.,
Respondents,
vs.
J. A. B. Adcock, A. H. Hamel, Ira W. Upshaw, W. S. Thompson, R. H. Goodier, J. T Thatcher, Frank J. Lutz,
Appellants.
(No. 15,325.)

This was a proceeding in mandamus, instituted in the Circuit Court of the City of St. Louis, at the June term thereof, 1908, by relators against respondents and appellants to compel them to examine them, touching their qualifications and fitness to practice medicine and surgery in the State of Missouri .

An alternative writ was issued and duly served upon respondents, who, in due time, filed their return thereto.

A trial was had, which resulted in findings for relators, and a judgment making the alternative writ of mandamus theretofore issued permanent, etc.

After taking proper steps in that direction, respondents duly appealed the cause to this court.

OPINION.

I.

Counsel for appellants insists that the judgment of the trial court is erroneous, for the reason that relators furnished no evidence to the Board of Health tending to show that Barnes University was a reputable medical college at the time they graduated therefrom, as required by section 3 of an Act approved April 4th, 1907 (Laws, 1907, p. 359). Said section in so far as it is material to the propositions involved in this case reads as follows:

"All persons desiring to practice medicine or surgery, in this state, or to treat the sick or afflicted, as provided in section 1 of this act, shall appear before the State Board of Health at such time and place as the Board may direct, and shall there be examined as to their fitness to engage in such practice. All per-

sons appearing for examination shall make application, in writing, to the secretary of said board thirty days before the meeting. They shall furnish satisfactory evidence of their preliminary qualifications, to-wit: A certificate of graduation from an accredited high school or state normal school, college, university or academy, a certificate from the county school commissioner, certifying that they have satisfactorily passed an examination equivalent to a grade from an accredited high school, or state normal school, college, university or academy. They shall also furnish evidence of having received diploma from some reputable medical college of four years' requirements at the time of graduation." By reading that section of the act it will be seen that it requires three things of each applicant who desires to be examined, touching his qualifications to practice medicine and surgery in this state, namely: first, that he shall make application in writing to the secretary of the board thirty days before the meeting thereof; second, that he furnish to the board satisfactory evidence of his scholastic qualifications; as therein provided for; and, third, that he shall also furnish to the board satisfactory evidence of having received a diploma from some reputable medical college of four years' requirements at the time of his graduation. While the act mentioned does not undertake to state what medical colleges are or what are not reputable within the meaning thereof; but by clear implication it leaves that question for the determination of the Board of Health. This is made manifest by the act requiring the proof of reputableness to be furnished to the board when the applicant presents himself for examination, and by withholding from the board the authority to issue the license until such *satisfactory* evidence is furnished.

There is no pretense in this case that relators or any of them furnished or offered to furnish any evidence whatever tending to show that the Barnes University, the one from which they had graduated and from which they held their diplomas, was a reputable medical college within the meaning of that act.

In our opinion the language of this act is susceptible of no other construction than it placed the burden upon the relators, when they presented themselves for examination before the board, to prove to its satisfaction by satisfactory evidence the reputableness of Barnes University, and especially the medical department thereof.

In the consideration of a similar statute to ours, the Supreme Court of Wisconsin, in the case of State ex rel. vs. Crittenden, 112 Wis., l. c. 584, used this language:

"The learned circuit court erred in holding, as it seems to have done, that every time a person presents himself before the board as a candidate for a state license to practice dentistry, tenders his dollar, presents his diploma, and makes proof of the statutory requisites for the granting of his application, other than that of the reputability of the school graduating him, it is the duty of the board to make an original investigation of and determination as to that subject by direct evidence of the character of the school at the time of the candidate's graduation, regardless of whether any evidence on the question is tendered by him or any request is made for such investigation.

"The burden in such case is on the candidate to demonstrate the reputability of his *alma mater*, not on the board to establish or disprove it."

"If relator had accepted the burden and offered proof to show that his *alma mater* was reputable, doubtless the board would have received and considered it in connection with all other information in its possession.

"Where the facts are so easily ascertainable as they were in this case * * * assuming, as we must, that the board would be actuated * * * by the single desire to deal justly * * * lapse of time after one investigation sufficient to allow a new class of graduates to come from the school would secure a reinvestigation if it was requested, accompanied by a reasonable showing of a material change in regard to the matters in which it was found deficent upon the previous investigation."

The Wisconsin statute simply left the reputableness of the applicants' *alma mater* to the examining board, and did not, as does this act, expressly require the applicant for a license to furnish satisfactory evidence thereof to the Board of Health.

See Laws of Wisconsin, 1901, Chap. 306, p. 418.

And in reference to a similar question, the Supreme Court of Ohio said:

"Nor do we find any provision which makes it the duty of the board to determine in advance of an application for a certificate to practice medicine whether a person holds a diploma from a medical institution of the proper standing. It is only when a diploma is presented upon such application that the action of the board can be invoked."

State ex rel Med. Col. vs. Coleman, 64 Ohio, l. c. 387.

The Ohio Statute, like the one in Wisconsin, merely submitted the question of reputableness to the board, without requiring the candidate for examination to furnish any evidence. That fact adds force to those rulings when we apply them to the case at bar, for the reason that our statute, in express terms, places the burden of satisfying the Board of Health of the reputableness of the school of which he is a graduate.

If that was all that there is in this case, then we could properly reverse the judgment, remand the cause, quash the alternative writ of mandamus and direct the circuit court to dismiss the suit; but that is not all that is presented by the record, and presented by counsel for determination.

"If we correctly understand the position of counsel for relators, they do not controvert the soundness of the conclusions reached in the previous paragraphs, but contend that, "Under the laws of this State the State Board of Health has no authority to adopt and promulgate fixed rules and regulations as the standard by which the various medical colleges of this State will be adjudged reputable or non-reputable within the meaning of the statute relating to the practice of medicine and surgery. The word 'reputable' as applied to medical colleges means reputation and must be proven in the same way."

The following authorities are cited in support of that contention:

State ex rel. vs. Lutz, 136 Mol, c. 639;
Illinois State Board vs. People ex rel., 123 Ill. 227;
State ex rel. vs. Crittenden, 112 His. l. c. 584;
People ex rel. vs. Ill. State Board, 110. 180.

In our opinion counsel for relators misconceive the meaning and object of the rules and regulations adopted by the Board of Health fixing the standards by which various medical colleges would be adjudged reputable within the meaning of the act under consideration. That rule simply provides that all medical colleges, wherever located (and not simply those situate in this State), which should on or before October 1st, 1907, conform to the standards specified in the schedule of minimum requirements, adopted by the Board on July 11th, 1907, "should be rated and classified as accredited and reputable, and whose students, after being graduated therefrom, should be admitted to the examination of the State Board of Health for licenses to practice medicine and surgery in the State of Missouri," without being required to furnish other proofs of reputableness, and thereby save each of them the time, cost and expense of furnishing the proofs required of them by said act. In other words, the Board, by said rules, undertook to require all medical colleges to adopt such standards as would establish and prove their reputableness in all cases, and thereby remove those burdens from each student who applied for a license, as provided by said act. But said rules of the Board do not provide that no graduate from any medical college which had not conformed to those requirements should not be examined, touching his qualifications to practice said professions.

This construction of that rule seemed to have been adopted subsequent to the origin of this controversy, and not prior thereto. Evidently the framers thereof entertained no such idea, for there is no such intention expressed in the rule itself. Neither the rule nor the Board is responsible for his erroneous construction.

In our opinion, since the act left it to the Board to pass upon the reputableness of all medical colleges, whose graduates applied to it for examination, and to determine the character of the evidence by which said fact was to be established, said rules were not only reasonable and just but were also wise and proper. All medical colleges and their students were thereby notified in advance as to what would satisfy the Board as to the reputableness of each college. The diploma alone from all colleges which had adopted those standards would entitle the holder thereof to take the examination without further ado. Otherwise many students might innocently be induced to attend colleges which were not, in fact, reputable, and consequently said students would thereby be prevented from establishing their reputableness. In all such cases a great hardship would be visited upon all such graduates, but under these rules of the Board no injustice could be done to any college or graduate thereof.

And beyond that, the adoption of said standards by the Board, and if the colleges will only conform thereto, the direct tendency thereof would be to uplift and better medical instruction, place her institutions of learning upon a higher plane, and reduce the practice of medicine and surgery to a more perfect science, all of which would result in great good to suffering humanity.

But suppose for argument's sake, we are in error in our views before expressed regarding the meaning and object of said rules of the board establishing said standards, and that it was the intention of the board to thereby notify, in advance, all persons who might present themselves for examination for

licenses to practice medicine and surgery that it would examine no one except those who presented a diploma from some one of the medical colleges which had adopted said standards, still that would no more excuse the applicant for examination from tendering to the Board such evidence as he might have, tending to prove that his *alma mater* was a reputable school within the meaning of said act than would the adoption of a rule by a judge upon the bench, promulgated a year in advance, to the effect that on and after a certain date he would try no case except where the plaintiff held a certificate from a minister of the gospel stating that he belonged to a church which believes in and teaches the Christian religion, would excuse the plaintiff from offering whatever evidence he might have tending to prove his case, even though he held no such certificate. Both, such rules of the board and of the court, would be illegal and void, and would constitute no legal bar to the applicant's right to stand the examination for his license, nor to the plaintiff's right to have his case tried according to law. Nor could the adoption of such a rule of the board or by court be construed to mean that the board in the one case or the court in the other, had thereby refused and determined to examine a particular person for a license to practice medicine, or to try a particular case filed in said court. Such a board or such a court might change its mind before the date fixed arrived, and before either was called upon to act in a concrete case. As long as a man or a body of men fill any official position, the law presumes he or they will perform their duties whenever any matter is legally presented to them for action, notwithstanding general declarations previously made to the contrary. This is true for the obvious reason that no officer can legally act or illegally decline to act until a matter is legally presented to him, calling for his official action in the premises.

It is only where some rule, ordinance, statute or other rule of conduct is relied upon in a particular case conferring or withholding some legal right can the courts or litigants question their validity. They may be unconstitutional, null and void, or invalid for any other reason, still that fact would be no excuse for a person's refusal or declination to perform some duty imposed upon it or him by some valid law. This was expressly held in the case of State ex rel. vs. Taylor, et al., decided by this court *in banc*, at its last sitting, not yet reported.

There the constitutionality of an act was questioned because one section thereof provided, that before the remonstrators against the organization of drainage districts would be permitted to contest its validity they must first give bond for costs, etc.

The court there held that the unconstitutionality of said statute was no excuse for said defendant's declination to appear and defend against said proceedings. The same is true in the case at bar, for the reason that if the rules of the Board establishing the standards for medical colleges are absolutely void, still that fact would be no excuse for a graduate therefrom applying for examination for a license to practice medicine, to refuse to furnish satisfactory proof of the fact that his *almo mater* was a reputable school, as he is required to do by said act of 1907. So, it must follow that it is wholly immaterial as to what was the general intention of the board in that regard so long as these particular relators omitted to furnish or offer to furnish any such evidence, and so long as the board had not refused to act in their particular case. Until that was done there was no just cause for saying the Board had declined to perform its official duties, as was shown by the rulings made by the Wisconsin and Ohio courts.

In no such case had the Board been legally or properly called upon to examine applicant, touching his qualifications to practice medicine and surgery; and until such demand is made and such proofs are furnished the Board is under no legal obligation to examine him or any of them.

So, under either view of the case, whether we consider the rules of the Board valid or invalid, relators are not entitled to have the alternative writ of mandamus made peremptory, for the reason that the Board has not been legally called upon to give them the examination which they ask this court to compel it to give them.

It is elementary that a writ of mandamus will not issue commanding an inferior court, tribunal or ministerial body to act until it is first established by the evidence that said court, tribunal or ministerial body has been legally requested to act, and that it has illegally declined to do so.

This court in the case of State ex rel. vs. Associated Press, 159 Mo., l. c. 421, in passing on this question, said: "It is fundamental in the law of mandamus that it is indispensable to granting the writ that a prior express and specific demand be made of respondent of that which relator seeks and that a refusal of such demand occurred before relator has any standing in court, or his application for the writ contains any grounds for relief."

We are, therefore, clearly of the opinion that the judgment of the court making the alternative writ of mandamus peremptory was erroneous.

III.

The relators are not without remedy, if they possess the necessary qualifications to practice medicine and surgery in this state. If they possess the necessary scholastic attainments and diplomas from some reputable college, and if they can produce before the Board of Health satisfactory evidence of the reputableness of said college, then doubtless the Board will, upon proper request, give them an examination, as provided for by the Act of 1907, and, if found qualified, the Board will presumably issue to them licenses to practice medicine and surgery in this State; but, if after such showing the Board should injustly and arbitrarily refuse or decline to examine relators, it would then be time enough to institute mandamus proceedings against the Board, requiring it to act in the premises.

State ex rel. vs. Adcock, 206 Mo. 550.

The judgment is reversed, and the cause remanded with directions to the Circuit Court to quash the alternative writ of mandamus heretofore issued by it, and to dismiss relators' petition.

All concur, except Laning, J., who dissents.

A. M. Woodson, Judge.

BOOK REVIEWS

Practical Fever Nursing. By Edward C. Register. Illustrated. pp. 352. Philadelphia and London: W. B. Saunders Co. 1907.

Dr. Register's book is a concise and valuable contribution to the subject of fever nursing. It contains practically all the information a nurse should possess on medical topics in the care of the sick, and describes in a succinct and acceptable manner just what duties a nurse should fulfill. Practitioners and students will also find the book useful.

Practical Dietetics. By W. Gilman Thompson, M. D., Professor of Medicine in the Cornell University Medical College, New York City. New York: D. Appleton & Co.

This is a practical work of over 900 pages, every one filled with something good for the physician. It has numerous cross references and a full index, and takes up the question of feeding both the sick and the well from infancy to old age. It contains a large list of acute and chronic diseases with diet appropriate to each; also the views of the world's foremost writers on the subject, and the dietary of the leading hospitals, army rations, etc. In a word, it is the study of foods to their last analysis, and will prove a valuable aid to every physician who is seeking to give his patients the advantage of the best there is in medical science.

A. L. A.

Song and Story From Les Chenaux: Vacation Memories. By Dr. William Porter, St. Louis, Mo.

This is a delightfully interesting volume of prose and verse composed by the author in moments snatched from the busy hours of practice. We see between the lines many pathetic scenes that left a deep impress which

the doctor has faithfully reflected in these pages. But it is not all sad, for there are many scenes in wood and valley that will bring memories of pleasure to all who have felt the delights of communing with nature far away from the busy, hurrying life of town and city. The book is artistically bound in green and gold and printed on deckle-edged paper.

TREATISE ON DISEASES OF THE SKIN: For the Use of Advanced Students and Practitioners. By George W. Stelwagon, M. D., Ph.D., Professor of Dermatology, Jefferson Medical College, Philadelphia. Fifth Edition, Revised. Handsome octavo of 1150 pages, with 267 text illustrations and 34 full-page colored plates. Philadelphia and London: W. B. Saunders Co., 1907. Cloth, $6.00 net; half morocco, $7.50.

This work needs no introduction to our readers, for its popularity is tested by the fact that five regular editions and two extra editions have been called for during the past five years. In this edition we find many changes made necessary by the rapid advance of modern medicine and especially is this true of tropical diseases, a subject that has been brought more closely to the attention of American students by reason of the more intimate communication established between tropical countries and America during the last few years. Some of the subjects have been rewritten; for instance, the chapters on frambesia and oriental sore. The chapters on verruga peruana and tinea imbricata have been changed and added to. The work is enriched with numerous illustrations, many of them entirely new.

A TEXT BOOK OF PRACTICAL THERAPEUTICS. By Hobart Amory Hare, M. D., B. Sc. 13th Edition. New York: Lea & Febiger.

This is a book of great interest, and one of the most up-to-date treatises on therapeutics. The author deals not only with most modern drug therapy, but covers the entire area of therapeutics on the line of practical application of remedial measures to disease and the feeding of the sick. The work is thorough and should be read by all general practitioners. F. B. F.

THE MEDICAL COMPLICATIONS, ACCIDENTS AND SEQUELS OF TYPHOID FEVER AND THE OTHER EXANTHEMATA. By H. A. Hare, M. D., B. Sc., Professor of Therapeutics in the Jefferson Medical College and Physician to the Jefferson College Hospital, Philadelphia, and E. J. G. Beardsley, M. D., L. R. C. P., Philadelphia. With a special chapter on the Mental Disturbances Following Typhoid Fever, by F. X. Dercum, M. D., Professor of Nervous Diseases in the Jefferson Medical College. Second edition, thoroughly revised and much enlarged. Octavo, 398 pages, with 26 engravings and 2 plates. Cloth, $3.25 net. Lea & Febiger, Philadelphia and New York, 1909.

This volume is devoted to a group of diseases which in the practice of every physician play a most important role. While the first edition of this work was devoted entirely to typhoid fever this new second edition also includes the other exanthemata and thus the field of its usefulness as a reliable guide book for the general practitioner has been greatly increased.

BOOKS RECEIVED.

A Practical Treatise on Ophthalmology. By L. Webster Fox., M. D., L.L.D., Professor of Ophthalmology in the Medico-Chirurgical College; Opthalmic Surgeon in the Medico-Chirurgical Hospital, Philadelphia, Pa.; Member of the Army Reserve Medical Corps, etc. With six colored plates and three hundred illustrations in text. Price, cloth $6.00. New York and London, D. Appleton and Company, 1910.

Diseases of Children. Edited by Abraham Jacobi, M. D., L. L. D. Member American Medical Association, American Pediatric Society, Association of American Physicians, American Climatological Association, Congress of American Physicians and Surgeons, New York Academy of Medicine, New York Pathological Society, New York Obstetrical Society; Consulting Physician Mt. Sinai, Bellevue, German Babies', Women's Infirmary, Orthopedic, Minturn, and Hackensack Hospitals, etc. An Authorized Translation from "Die Deutsche Klinik." Under the general supervision of Julius L. Salinger, M. D. With thirty-four illustrations in the text. New York and London. D. Appleton and Company, 1910.

Heart Disease Blood-Pressure and the Nauheim-Schott Treatment. By Louis Faugeres Bishop, A. M., M. D. Clinical Professor of Heart and Circulatory Diseases, Fordham University, School of Medicine, New York City; Physician to the Lincoln Hospital; Late Chairman of the Section on Medicine of the New York Academy of Medicine; Member of the New York Pathological Society; Alumni Association, St. Luke's Hospital, etc. Third Edition. New York, E. B. Treat & Company. 1909. Price $3.00.

The Practical Medicine Series. Comprising Ten Volumes on the Year's Progress in Medicine and Surgery. Under the general editorial charge of Gustavus P. Head, M. D., Professor of Laryngology and Rhinology, Chicago Post-Graduate Medical School. Volume X. Nervous and Mental Diseases, edited by Hugh T. Patrick, M. D., Professor of Neurology in the Chicago Policlinic, Clinical Professor of Nervous Diseases in the Northwestern University Medical School; ex-President Chicago Neurological Society. Charles L. Mix, A. M., M. D. Professor of Physical Diagnosis in the Northwestern University Medical School; ex-President Chicago Neurological Society. Series 1909. Chicago. The Year Book Publishers, 40 Dearborn Street. Price of Series, 10 volumes, $10.00. Price of this series when sold separately from series, $1.25.

Spondylotherapy. By Albert Abrams, A. M., M. D., San Francisco, Cal. The Philopolis Press, Suite 406 Lincoln Building, San Francisco, Cal. Cloth, 420 pages, 100 illustrations. Price $3.50.